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ORIGINAL LECTURES.

THE PATHOLOGY OF PUPERAL ECLAMPSIA.

Abstract of a Clinical Lecture delivered at the Vienna General Hospital.

BY PROF. JOSEPH SPAETH.

(Specially reported for THE MEDICAL NEWS.)

THE subject constituting the text of the following remarks was a powerfully built, well-nourished peasant woman, who was delivered at two o'clock A.M., and who was attacked one-quarter of an hour after delivery with an eclamptic seizure. The seizure lasted but a short time, and did not repeat itself during the course of the day. At the time of presentation before the class, the patient had apparently recovered, and was perfectly conscious. The temperature was not elevated directly after the seizure, and showed no important deviation from the normal during the following day. No albumen was demonstrable in the urine.

If, said Prof. Spaeth, we inquire into the etiology of this particular seizure, we will find that the causes are no more detectable than those of puerperal eclampsia in general. About the whole subject we know nothing positively. Up to the year 1843, very indefinite conceptions of the causes of this affection were expressed in such vague, general terms as 'nervousness,' 'disposition to convulsions,' 'reflex excitability,' *et id genus omne*. When we observe that eclamptic seizures occur just as frequently among the heartiest peasant women as among the most delicate females in a large city, we must give up the condition of the necessary antecedency of a feeble constitution. A so-called transposition or metastasis of pains was then accepted as the cause of the seizures, and this was bound up with the obscure idea that the innervation which normally should have effected uterine contractions, was exercised upon the muscular structures of the trunk. In 1843, a substantial advance was made in this inquiry. It was asserted that albuminuria could be demonstrated in every case of eclampsia, and that the convulsions were initiated by the altered condition of the blood resulting from *morbus Brightii*. Frerichs declared the symptoms to be uræmic, and originated the theory that the products of decomposition of the urine, in particular, carbonate of ammonium, acted as irritants upon the nerve-centres. Frerichs further asserted, in proof of his position, that carbonate of ammonium could be detected in the expired air of a patient suffering from eclampsia parturientum, by holding up before the mouth and nose of the individual a glass rod moistened with hydrochloric acid, whereupon a thick, white cloud of ammonium chloride would be deposited. When, however, in actual fact, this experiment does succeed, which is by no means always, it must be borne in mind, that ammonium carbonate can arise just as easily from putrefactive changes in the air of the sick-room, as from metamorphoses within the body of the patient. Frerichs recommended, as the resultant of his theory, the administration of benzoic acid in puerperal eclampsia.

Other cases of eclampsia, however, were observed where no *morbus Brightii* was demonstrable, and where no disease of the kidneys whatsoever could be determined. Rosenstein then set up the theory that serous exudation into the brain was the cause of eclampsia.

He affirmed that oedema of the cortex cerebri induced coma, while oedema of the more deeply lying convolutions produced convulsions. Pregnant women, as a fact, have a significant disposition towards oedema, and this is to be explained by the fact that the blood of pregnant women is relatively poor in albumen. Every elevation of arterial blood-pressure aids transudation of serum. Now, we know that activity of the muscles causes a rise in blood-pressure, and it is plainly to be seen that during delivery, when the labor pains call into functional activity every muscle in the body, a very significant elevation of arterial blood-pressure must ensue. Rosenstein's theory must seem very plausible, but, on the other hand, Spiegelberg, about ten years ago, injected into the veins of dogs ammonium carbonate, and caused thereby convulsions.

Statistical collections of observed cases of eclampsia give a large number where no albumen was demonstrable in the urine, and where the autopsy revealed no disease whatsoever of the kidneys. After this *résumé*, we must conclude that neither the theory of Frerichs, nor of Rosenstein, is extensive enough to cover all cases, and that, as regards the etiology of the affection, we know nothing positively.

One interesting feature about eclampsia is that isolated, single cases extremely seldom occur; when one case is observed, we can always rest assured that a number will immediately follow. The case before us can be characterized as an extremely light attack, as there has been but one seizure, and the patient is already conscious. In genuine eclampsia, the seizures repeat themselves in great, sometimes fabulous, numbers, as many as sixty and over. The intervals are of very various duration; they may last minutes, or even days.

Kiwisch has affirmed that eclampsia only occurs in women in labor. Cases are not rare, however, in which eclampsia has occurred during pregnancy; evacuation of the uterus, in these cases, soon follows, however. In the first half of pregnancy eclampsia is never observed.

The treatment must be directed by the view we take of the etiology and pathology of the affection. Formerly, derivatives and rubefacients were employed largely. Revulsion, by means of the rectum, was formerly also a very popular remedy. Among alternatives, tartar emetic was extensively used, usually one grain tartar emetic to six ounces decoctum altheæ, in tablespoonful doses, was exhibited during the course of the day. In the unconscious condition of the patient, the folly of the administration of this drug is sufficiently obvious.

Later, when the essence of the disease was supposed to be a congestion of the spinal cord, blood-letting was extensively advocated. By all rational practitioners of medicine, this method of treatment has been abandoned, since it has been abundantly demonstrated by post-mortem examinations that eclamptic patients die of oedema of the lungs, and that the brain and spinal cord is in an anæmic condition.

The most generally accepted treatment, at present, is the use of all forms of narcotics. Probably the best results are obtained by the conjoint employment of chloroform inhalations and subcutaneous injections of morphia. This treatment was accepted by Rosenstein as quieting the muscular system and thereby preventing a rise in arterial blood-pressure.

ORIGINAL ARTICLES.

THE COMPARATIVE VALUE OF LARGE AND SMALL DOSES, AND LONG AND SHORT INTERVALS, IN THE ADMINISTRATION OF MEDICINES.

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I am unable to perceive any good grounds for the routine plan of ordering medicines to be taken every two, three, or four hours, except that in some instances their more ostensible or gross effects begin to pass off at about these intervals. If the inquiry be made of the ordinary practitioner why he orders the administration of his doses at such intervals, he would be puzzled to give any other answer than that cited, or perhaps refers to authority for it only; and, so far as authorities are concerned, they seldom assign any reasons other than the above for such arbitrary rules, and in a purely incidental way. In fact, the more any one thinks about the method, the more does it appear in the main as a crystallized habit or a simple following of established routine handed down from one generation to another. But even the well-grounded observation that the maximum effects of some medicines begin to subside at such approximate intervals furnishes no adequate reasons for concluding that like rules appertain to all, or even to the larger number of medicines, nor even for the supposition that the maxima of effects are the most efficient for the removal of disease. The appearance and disappearance of the extreme effect of a diaphoretic or of a diuretic may be much more brief or more extended than the three-hour interval; so may that of an opiate, or of a dose of quinia.

But granting that the maxima of gross effects of medicines appear at about these intervals, and that a repetition of them is required for their maintenance, by no means proves that large and distantly repeated dosing is the most conducive to steady therapeutical results, or that it is the best in most instances for the removal of disease. Assuming gastric imbibition to be in a nearly normal state, and remembering the fact that the blood makes its circuit in about every three minutes, and assuming it to be the object to act upon the blood or upon the nervous system, or upon some functional derangement of an organ more or less remote from the stomach; and, above all, assuming it to be the object to render the influence of a medicine, as far as practicable, as uniform and continuous as that of the disease, so as to oppose, modify, or subdue it, then we equally fail to discern the wisdom of ordering large and distantly repeated dosing.

Besides, the practical applications of several large and important classes of remedies show no maxima and minima effects on which to base a rational pretext for prescribing large and distantly repeated potions. Such is true of alteratives, of febrifuges, and of tonics. Their immediate and mediate effects, it is commonly impossible clearly to discern, while the rule of dosage is usually all that the stomach can well bear. Perhaps the rule of three- or four-hour

intervals first arose during the crude conceptions of times long gone by, when medicines, like food, were supposed to need a certain period for proper assimilation; and hence, as large potions of them as the stomach and system could well tolerate were ordered, and to be taken at about meal intervals. The object of this paper is to inquire if such a method is the best, not only for rendering the most effectual assistance to the *vis medicatrix naturæ*, in the removal of disease, but also for promoting and popularizing the practical applications of the healing art, by rendering our prescriptions much less offensive and distressing than they now are.

Disease, with comparatively few exceptions, is a continued state of abnormal action for more or less extended periods, though subject commonly to one or two diurnal exacerbations. Examined more closely, and with instruments of precision, its phenomena in general terms are found to involve molecular changes of peculiar kinds, whose energy usually far exceed those which pertain to the healthy state. That unusually swift transformations and disintegrations of the blood and tissues are going on in states of disease, is amply confirmed, deductively, by the abnormally high temperature, the rapidity of the circulation, the general restlessness, the insomnia, and the copious ejections of retrograde organic matters from the system through its various outlets. The high temperature alone warrants the conclusion that a swifter rate of transformation is in progress than ordinary.

Turning now from these generalities in reference to acute diseases to those of a chronic type, we find that although there is not the same evidence of a like rapid metamorphosis of a systemic kind, an intimate knowledge of the morbid state nearly always renders it apparent that at the chief point or points of abnormality the same, though a more limited, sphere of unnatural metamorphic change is in progress. This may be pronounced to be invariable, except in the sequelæ of an aborted organic metamorphosis, as, for instance, the benign sclerosis of some important tissue. But it is here specially worthy of remembrance that during the inception and maturation of a morbid process, confined to some organ or special tissue of the body, the rule of undue molecular change and the enhancement of morbid energy are not subject to any *omni bihori* or *quod nihilo* rule.

Pathological action being then very much the same as the physiological in continuity, we are again led to inquire on what grounds are medicines ordered to be taken at two, three, or four-hour intervals, and usually in doses as large as the stomach can bear, or to the utmost limit of safety upon the functional integrity of some organ of the body. Is the organism better enabled to throw off disease by disturbing medication, or by heavy strokes, so to speak, repeated at three- or four-hour intervals, or by the proper recognition of the principle, that as morbid processes are usually only subject to minor variations in the continuity of their energy, our counteracting agencies should be subject to like rules? If the latter, then it follows as a necessary corollary that remedies should be administered in

much smaller doses than they now are, and at far shorter intervals. This is the point which I wish the reader to consider with me.

It has been abundantly proven that liquid or soluble medicines usually make their appearance in perceptible quantities in the urine or other excretions or secretions, in from five to thirty minutes after administration; much, of course, depending upon the energy of absorption, and the functional state of the secreting or excreting organs. These may be inordinately active or inactive—points which do not here concern us—the rule being within the limits given.

Suppose, then, it to be the object, which no one will deny, of the therapist to modify beneficially the molecular energy of disease, by the molecular energy of a medicinal substance, is it not the most rational mode not to distress or embarrass the stomach by heroic doses of it, but to order small ones often repeated? Such a course commends itself to the judgment on several considerations, some of which I shall here adduce. The administration of medicine in full doses is very apt to beget some gastric distress bordering upon, or actually productive of, nausea, with or without vomiting. The mere fact that such a condition has ensued is, *per se*, evidence that the stomach has set up actions (reversed vermicular movements) to expel the medicament, and this being the state the least of all favorable to prompt imbibition, the hindrance of therapeutical effect is thus successfully accomplished. The spontaneous occurrence in health of nausea after eating or drinking denotes the arrest of gastric assimilation, and is it not plain that its induced state must also be productive of a like arrest for longer or shorter periods? Of course, when vomiting or temporary nausea is the object desired, the larger dose is justified, but when it is the purpose to have a medicine affect the system at large, and act upon or through the blood, the unsuitableness of large doses for a prompt and steady effect is sufficiently evident. Besides the retarded effects of large doses of medicine, they not unfrequently injure the stomach, giving rise to uneasiness bordering on pain, the nausea frequently reaching the grade of emesis; or else by increased downward peristalsis, the medicine is passed quickly into the intestines, where it is either expelled in larger part, or rendered almost nugatory by diminished regional absorption, and by admixture with the fecal contents.

In nearly all forms of disease, the object of the therapist being to modify morbid energy, and usually more in one special organ or tissue than others, a little reflection ought to make it, to say the least, more than probable that this can better be accomplished by small and oft-repeated doses than by the opposite method. The imbibition of a medicine is not a spasmodic but a continuous process, nor does the medicament require two or three hours for digestive assimilation. Whenever a steady impression or a continuous morbid process is desirable (and when is it not?), the frequent administration of the medical agent has the best apparent correspondence to the internal process. A nicer adjustment of ther-

apeutical energy to vital actions is not only thus attained, but flood-tides of distressing or alarming effects from the over-effects of medicines are obviated, as are also the cumulative perturbations of function, now excessive, then defective, or may be perverted. Indeed, the disturbances of function from large doses are often so profound, that the over-effect of one medicine needs to be corrected by another, thus compelling the medical attendant to turn his attention to the correction of his own errors, instead of fixing it upon the disease he is attempting to manage.

Not a few physicians seem to take a sort of coarse-minded delight in producing startling effects by their prescriptions. If a patient be made very much more sick by the medicine than he was by the disease, if he has been vomited or purged severely, and not much the worse for it, such a pill-dispenser is disposed to regard the strength of his potions with a pleased serenity. But it may be—indeed, frequently is—the case that he is put upon the defensive to justify such a severe course as a therapeutical necessity; and he also often perceives the necessity of correcting the extreme effects of his doses. All I have to say to such is a repetition of the golden rule—do not to others which you would not wish done to yourself. One thorough personal experience of that kind every such physician should be made to undergo. I am far from asserting that heroic doses, or even distressing effects from the action of medicines, are never justifiable, but only this, that, as a rule, by small and frequent repetitions of them better therapeutical effects are almost invariably obtained, and in a manner scarcely disagreeable; more refined, prompt, and decisive, because more congruous with the unbroken and ceaseless play of the functions in the most delicate and nicely adjusted organism with which man has to deal.

But over all evidential statements in favor of this reformation rises that of experimental observation. Let the doubting reader give the plan here advocated a fair trial in any appropriate cases of disease, and, if a good observer, apt to discern something more than the production of crass effects—which any boor can—viz., the far more subtle indications of improvement in the action and interaction of the vital functions, then I doubt not of agreement. Or suppose it to be desirable to increase a secretion or excretion; suppose it to be desirable to bring the energy of a medicine to bear upon a special organ or tissue, so as to modify its functions for the better; suppose it to be desirable to produce an alterative effect upon the organism as a whole, let small and oft-repeated doses be ordered, and the adduction of further argument on superiority would not be required. Suppose aconite is deemed to be the appropriate remedy, say for a facial neuralgia, let drop doses of the fluid extract of the root be prescribed, every half hour or hour, according to the urgency of the pain, and when this begins to abate, lessen the dose or extend the interval, until complete relief is afforded. Or suppose that free biliary and intestinal excretion presents itself as the indication to be carried out, let half-grain granules

of calomel be alternated every hour with granules of aloin of the same size, and a free, easy, and steady outflow will be produced, the calomel exciting (despite Bennett's experiments) the discharge of bile from the liver, and the aloin, by its influence upon the large intestine, insuring its expulsion from the body. All this can usually be carried out without producing the sickness, nausea, and malaise which ordinarily follow the administration of enough of these agents, at a single dose, for the production of a like effect. Or suppose that Fowler's solution contains the kind of energy needed for the removal of disease, let a drop be ordered every hour or half hour, and the therapeutical effects will be superior to doses as large as the stomach can well bear taken two or three times a day. The reasons why, are not difficult to apprehend. The ten-minim dose, if taken on an empty stomach, not unfrequently acts as an irritant, and thus defeats partially or entirely the purpose of its administration, while, if taken after meals, its action is somewhat delayed, and its influence in part lost by admixture with excrementitious matters. But if taken in much smaller doses, and at shorter intervals, an immediate irritant effect is obviated, and, by the law of averages, a more certain and uniform mean of effects is obtained during the variable states of the stomach and its contents.

Or, again, small and often repeated doses are peculiarly appropriate in cases of gastric debility, irritability, and in diarrhoeal and dysenteric disorders. What are known as full doses of almost any medicine, nay, even of foods and drinks, often defeat the purposes for which they are taken by acting as repelling irritants on the gastric and intestinal villi, whereas small and frequently repeated ones do not arouse and excite vital resistance like a large and rough bolus. In almost all forms of disease the sensibility of the stomach, like that of the nerves at large, is usually in an exalted condition, with its functional activity more or less in a state of abeyance, and yet the rule in prescribing is to make the dose as large as the stomach can well tolerate. Either unintended extreme or irregular effects are thus almost sure to arise, results it has long been the universal habit of physicians to guard against only, instead of seeking radically to abolish. By rendering the applications of medical energy more nearly synchronous with that of a morbid process, not only would these untoward effects be obviated, but the energy of quickly successive administrations would be more equally diffused, more continuous, and more in harmony with that of the disease which it is the object to modify.

It may occur as an objection to the method of administration here advocated that the eliminative organs may carry small portions of a medicine out of the system before it evolves the characteristic effect of a large dose, and so cause a failure of the object intended. In other words, if a saline be prescribed to act as a purgative, if the dose is small and frequently repeated, the effect may be simply that of diuresis. That such is the operation of some salines when only a few small doses are ordered, the most ordinary experience sufficiently verifies.

But the objection, though plausible, is not valid. Either the saline is not aptly selected, properly combined, or skilfully administered. There is ample proof of this outside of the testimony of Drs. A., B., or C. The evidence furnished by the innumerable invalids who resort to the aperient mineral springs of the world, is all to the effect that very insignificant portions of saline elements, frequently repeated, do get up with great uniformity an active cathartic effect. The amount in grains of the saline thus taken, *per diem*, is far below that which the physician usually orders at a single draught, and yet in the face of all this, and knowing how easily taken and pleasant in effect is the action of the mineral water when compared with the huge and nauseating dose of the apothecary, the old method remains in full vogue.

There are, as a matter of course, some states of disease in which rapid and strong explosions of medical energy are eminently proper, such as the sudden onset of a violent paroxysm of disease, as, for example, in migraine, or in any sudden seizures of extreme pain, where the hypodermic method is of course the best, or when the prompt production of a mechanical effect is desirable, as in emesis. But in each of these examples, it will be discerned that the objects are temporary, simple expedients to meet certain emergencies—not the carrying out of a systematic plan of cure for a protracted disease.

We are thus brought to this cardinal principle of therapy, deserving to be ever kept in mind, that as the almost invariable object of administering medicines is for the purpose of modifying deranged vital energy by the energy of the medical substances at our command, the applications of them should conform as nearly as practicable in grade and steadfastness of action to that of the disease. Whenever the morbid process shows continuity, so also should that of the agents brought to bear upon it. Or, putting the statement in an obverse aspect, as the administration of large doses of medicine at three- or four-hour intervals is acting on the rise, culmination, and decline principle of effects, such applications of therapeutical energy are justifiable only when the vital morbidity shows a like course. Is there any thing like this variability in the ordinary course of a single disease?

When the disease to be combated is inflammatory, or a febrile zymosis, or a structural lesion of some organs, or simply a functional derangement, more or less durable; or when the principle of therapeutical management clearly appears to be to keep all the outlets of the body in grade of action somewhat in consonance with the rapidity of molecular waste, the aim of the physician, it appears to me, should be to render the influence of his remedies far more uniform and continuous than he now does, or more like that of the disease. A better congruity in these respects is a comparatively easy matter, as it involves simply increased division of doses and of their periods of administration.

SUPPOSED DEATH BY CHLOROFORM.

BY R. A. KINLOCH, M.D.,
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It is desirable that there should be recorded every death attributable to either of the anesthetic agents in use, for it has hardly been settled that one of these agents should be universally employed because of its immunity from danger. In certain sections of our country and of Europe, chloroform is still the favorite article used, for its general adaptability and because in the largest experience it has proved safe as well as satisfactory. In other sections there is a strong prejudice against chloroform, and a belief that ether is entirely free from danger. I have, in an experience of over thirty years, never had occasion to distrust chloroform, and have never until now seen a death attributable to its administration. From very many experiments and observations, however, I have been led to believe that ether is less apt to be followed by nausea or by great depression of vital power. My rule of practice then, in late years, has been to employ chloroform in surgical and obstetrical practice, except in operations necessarily protracted, or where nausea and vomiting would be prejudicial to the condition of the patient. I am inclined to doubt if the death, in the case which follows, can be attributed solely to chloroform. Fright, terrible anxiety, a peculiar nervous organization, and an exalted moral sensibility, may have had much to do with the sad termination. But I prefer reporting the case and leaving it to the verdict of the profession.

Further interest attaches to it from the fact that the secular press has circulated through the country the grossest mis-statements regarding the case itself, and the conduct of the physicians connected with it. I will notice and correct only two of these. It has been falsely stated that assistants were introduced into the operating chamber of the patient against her wishes, and while she was insensible from chloroform. The truth is, the consent of the lady was freely given, because she knew that the assistants were necessary. Her only desire was that she should be chloroformed before they were introduced. Next, it has been affirmed that the cause of death was suppressed in order to shield the physicians, and to prevent a coroner's inquest. The truth is, the death (although the matter was rather doubtful) was at once assigned to the chloroform. This was announced frankly to the family of the deceased and to others. Moreover a mortuary certificate of death from *chloroform narcosis* was handed to the City Registrar, in order to obtain a permit for burial.

CASE.—On the 7th of May, 1882, I was called to attend Mrs. L. R., who had long been an invalid, and been attended before by two very worthy practitioners of this city. She was aged about forty, married, a mother of two children, the last being six years old. I found her thin, anaemic, unable to exercise without much backache; never sleeping well at night; having usually prolonged and profuse menstruation—in the intervals, much leucorrhœal discharge; great bearing-down sensa-

tions, with vesical and rectal tenesmus; difficult digestion and constipation. These symptoms, in part, pertained to her since the birth of her first child, but had been more continuous and severe for several months past. There now also is complaint of severe paroxysmal cough, with the physical signs of sub-acute bronchitis on both sides of the chest. The pulmonary symptoms Mrs. R. attributed to a recent cold. She said she had sent for me chiefly to relieve her of the trouble which she had had during many years, and which made life a burden to her. She said she knew the disease to be uterine. Other physicians had treated her for this; but she was in hope that a radical operation might relieve her. There was prevailing an epidemic of whooping-cough, and the children in the house had suffered. Mrs. R. had formerly had this disease, but the character of her pulmonary symptoms led me to believe that she was to some extent suffering from the "epidemic constitution of the atmosphere." She was anxious for a thorough examination; so, after prescribing for her cough, I appointed an early day for the purpose, and in due time discovered a left lateral fissure of the cervix, reaching to the cervico-vaginal junction; also an elongated and enlarged cervix, a prolapse of the bladder, and prolapse and partial retroversion of the uterus. I gave as my opinion that much could be done by treatment, both local and general, but that, first of all, the cough must be relieved, and the digestive organs improved. In time, I proposed to apply local remedies to the uterine and cervical cavities, and to close the fissure by operation. Mrs. R. was intent upon an early operation, as she said she had too long been trying palliative remedies. I could with difficulty persuade her that these radical means must for a time be postponed. After about a month's general treatment, part of which time I was absent from the city, Mrs. R. had so improved that she again renewed the question of operation, saying that her cough did not now affect her, and that she wanted to be attended to before leaving the city for a summer's vacation. While regarding her as a rather bad subject for any operation, I, nevertheless, thought the cervical fissure could be closed without risk, and that, by the use of a pessary, she could be enabled to go comfortably into the country.

June 19th was appointed for the operation. Mrs. R. had always been exceedingly sensitive as to the matter of personal exposure, and I readily consented to give the chloroform only in the presence of female attendants. When the request was made for the patient to get upon the table, she became much excited, and could scarcely be comforted and assured. She shrank back as one having a feeling of impending danger. I subsequently learned that she had had a presentiment of death, and went so far as to write out requests she wished fulfilled after death. I mention these facts to illustrate the nervous condition of the subject, as with many it may be considered as having something to do with her sad end. The chloroform was given upon a towel folded funnel-fashion. The towel was at first held a little distance from the face, until the patient grew accustomed to the vapor and was habituated to

the proper inhalation. The usual period of excitement came on, with some struggling of the arms and rolling of the body. One of the female attendants helped to control these movements, and in a short time relaxation began to be evident, with the slightest stertor of breathing. Less than three drachms of chloroform had been used. I at once suspended the chloroform, passed the towel over to the nurse, who was at the bedside, and a little removed, and asked her to hold it where she was. I felt no apprehension about the patient, and moved to the door separating the chamber from the parlor, and called to Drs. Simons and Pelzer, my assistants, to enter. I now took my position at the foot of the table, while my assistants remained at the side, and began to put the patient into the semi-prone and lateral position for operation. I little thought that during the few seconds of absence the cumulative effects of the drug would be exhibited. Glancing at the face of the patient, I suddenly discovered that it was cyanosed, and the eyes staring and fixed. I called to Dr. Simons to notice if the breathing was right, and almost simultaneously we both advanced to the patient's head. I saw that the respiration was embarrassed, and heard a gurgling noise coming from the presence of mucous secretions in the bronchii. Dr. Simons raised the head of the patient, and turned the body partly over into the supine position. I threw up the windows, dashed cold water upon the face and chest, slapped the surface smartly, depressed the head, while the body and lower extremities were raised, injected brandy, and subsequently liquor ammonia and brandy, subcutaneously. Towels were wrung out of very hot water and applied over the cardiac region. Used galvanic battery as soon as this could be secured. Finally, noticing that the respiratory movements were now entirely arrested, also the action of the heart, while the veins of the neck were greatly distended, I opened, first, a vein at the bend of the arm, and afterwards the right external jugular, hoping that, by removing some of the dark blood from the cavities of the heart, this organ would have a better chance for contracting. All to no purpose—the heart remained paralyzed, and we had soon to realize the fearful fact that death had supervened.

A CASE OF STRANGULATED INGUINAL HERNIA WITH AN UNUSUAL COMPLICATION.

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ON April 6, 1882, I was summoned at 6 P. M. by Dr. Tuttle, one of my assistants at the Philadelphia Hospital, to see a patient who had just been admitted, in a state of prostration without any history, the man being a Hungarian and unable to speak any intelligible language. I found the patient's pulse fairly good—80, I believe—with no apparent increase of temperature. The countenance wore a slightly anxious expression. There was hiccup, and at intervals a little vomiting of a glairy mucus. A large bulging protrusion existed in the right inguinal region. There was no testicle to be found outside of the tumor, which was of oval shape, and

about four inches long, extending from a point corresponding to the internal abdominal ring to the raphe of the scrotum.

Upon percussion, an uncertain impulse was elicited, suggesting a fluid accumulation. There was no resonance, but a doughy feeling, giving the impression of a bunch of omentum. There was no impulse on coughing. There was no discoloration of the integuments, and no tenderness on pressure or manipulation. The abdomen was distended, and the patient complained of pains about the umbilicus. From a fellow-patient, who could speak a little Hungarian, it was ascertained that the bowels had not been moved for five days, and that the tumor had existed for two years, having been caused by an injury while riding on horseback. It had not increased in size lately, and the patient did not feel any new uneasiness in or about it. He felt the effect of constipation only, and had repeatedly tried to defecate without avail before coming into the hospital. Taxis had no effect in overcoming the protrusion.

I considered carefully the symptoms for strangulation, *i. e.*, the hiccup, the tympanites, the umbilical pain, and the absence of fecal discharges for five days, and the absence of impulse on coughing; and those against strangulation, *i. e.*, the pulse, the temperature, the absence of discoloration, and the freedom from tenderness in the region of the groin, the patient lying on his back without drawing up the legs to relax the part, and the strong probability of a testicle undergoing some cystic degeneration, etc. The weight of the latter symptoms seemed to justify the conclusion to administer oil by the mouth and by the rectum, to apply mush poultices over the abdomen, and to give stimulants and milk, and wait for further developments. On the morning of April 7 I found that the man had had an evacuation of the lower bowel by the enema, but that he had not retained anything whatever by the mouth. His pulse and countenance were good, although he was perceptibly weaker, and he vomited while I was in the ward for the first time what looked like stercoraceous matter. I therefore decided to operate without further delay, as it was evident that he was suffering with intestinal obstruction. The symptoms in other respects were unchanged from the condition of the evening before.

As soon as the patient was etherized, I cut down upon the tumor in its long diameter, laid open the several layers of fascia upon a grooved director, coming, finally, after ligating one small vessel, to what had the appearance of a cyst wall. The testicle could not be clearly defined. I broke up adhesions which were everywhere about the mass, and feeling sure that fluid was contained in it, I inserted an exploring needle, which showed that a serous fluid was within. A hypodermic syringe was then introduced, and readily withdrew an amount of bloody serum. The fluid looked like that of a hydrocele. I incised the sac, and at least four ounces of fluid escaped. Through the walls of the sac a bunch was felt at the upper portion, which was conjectured to be the testicle; but on further slitting up the sac, a large knuckle of intestine was found, with its mesen-

terly doubled upon itself, and presenting all the indications of having been incarcerated for some time. There were adhesions everywhere about its neck, attaching it to the sac, and a more recent constriction immediately above. The constituents of the cord and the testicle were found imbedded in a thick layer of tissue closely adherent to the inner side of the sac, the testicle itself being atrophied. After nicking the restraining bands about the neck carefully with a hernia-knife, the gut was restored to the abdomen. The walls of the gut were dense and thickened, and although congested had no indications of ulceration. The large mass of peritoneum being thickened and indurated, and having the cord and testicle intimately adherent upon its inner portion, was included in a stout double ligature and cut away. I united the edges of the wound with deep interrupted wire sutures, taking care to include the pedicle of the peritoneum in one of them. A carbolized sponge was trimmed so as to fit closely over the parts, and firmly applied with a spica bandage. The patient died eight hours after the operation from shock and peritonitis, having with great difficulty been brought out of the anaesthetic state, and having received every possible attention to sustain the powers of life.

The autopsy showed that a portion of the ilium (about fourteen inches long) was enlarged, indurated, and deeply congested. The point of strangulation was clearly marked. Very little fluid was found in the peritoneal cavity. The pedicle of peritoneum and the cord completely blocked up the internal ring.

In view of the facts above related, I am inclined to believe that the tunica vaginalis testis had always communicated with the peritoneal cavity of the abdomen before the receipt of the injury on horseback which the patient referred to, and that the intestine at that time found its way into the inguinal canal behind and above the testicle, and remained there. The wasted condition of the testicle was probably due to pressure on the cord, caused by the incarcerated intestine. The bands of lymph, which were remarkably firm and resisting about the neck of the hernia, opposed the return of the peritoneal fluid into the abdomen, although it is doubtful if there was not a passage existing before the strangulation. The extraordinary amount of peritoneal fluid contained in the sac was a most interesting feature of the case, as it rendered it very difficult to form a correct diagnosis. The unyielding nature of the walls of the sac is often found in an incarcerated hernia, but the apparent absence of the testicle in this case, and the character of the tumor, with its imperfect history were most misleading.

MEDICAL PROGRESS.

SULPHIDE OF CALCIUM AS AN ANTISUPPURATIVE.—DR. ANDREW H. SMITH, Chairman of the Committee on Restoratives of the Therapeutical Society of New York, furnishes to the *New York Medical Journal and Obstetrical Review* for June, 1882, a report of the committee on the use of sulphide of calcium for the purpose

of preventing or diminishing suppuration. After giving the experience of several members of the Society, Dr. Smith concludes his report as follows: Judging from this limited number of cases, it would seem that we are warranted in concluding that in many cases of suppurative affections, ranging from the small pustules of acne to extensive suppurating surfaces, an appreciable, and often a very marked, benefit is derived from the use of the calcium sulphide, suppuration which would otherwise take place being averted, or the quantity and duration of an existing discharge being lessened. At the same time its action is not uniform; and in many apparently favorable cases it will fail entirely. The drug is somewhat prone to irritate the stomach, and this circumstance affords an indication for small doses frequently repeated instead of larger ones at longer intervals. One-tenth of a grain every two hours in acute cases will generally secure the full therapeutic action of the drug, but larger doses may sometimes be required, and some patients will bear well a grain three or four times a day. Even in small doses the sulphide will occasionally produce headache, and the patient is usually more or less annoyed by eructations of sulphuretted hydrogen.

COLOBOMA OF THE CHOROID AND OPTIC NERVE SHEATH.—DR. A. H. BENSON (*Dublin Journ. of Med. Sciences*, March, 1882) describes two cases of coloboma exhibited at a recent meeting of the Medical Society of the King and Queen's College of Physicians. Ophthalmoscopic drawings are appended. Both cases were discovered while the writer was assisting Dr. Fox in examining, for statistical purposes, the eyes of the deaf mutes in the institutions about Dublin. Both patients were deaf and dumb.

In the one case there was, in each eye, coloboma of the choroid without implication of iris or disk. In the other case there was in the right eye an enormous coloboma of the optic nerve sheath—the largest on record—associated with, but separate from, a very small coloboma of the choroid; and in the left eye a smaller coloboma of the optic nerve sheath, without coloboma of either choroid or iris, but in the position of the junction of the lips of the foetal fissure a disturbance of the pigment layer, suggesting the idea of a raphe, where the trouble just stopped short of the production of a coloboma.

From these cases the writer concludes:

1. That coloboma of the choroid may exist without corresponding coloboma of the iris.
2. That closure of the fissure in the pedicle (optic nerve) takes place independently of the fissure in the optic cup.

3. That the fissure may close in the optic nerve and remain open in the bulb, or may close in the bulb and remain open in the nerve, or may remain open in both bulb and nerve, closure having taken place in the interval between the two colobomata.—*Ophth. Review*, June, 1882.

EXCISION OF PYLORUS.—HENCK, of Heidelberg (*Wien. Med. Blätter*, May 18, 1882), at the Congress für Innere Medizin, tabulated the history of twelve resections of the stomach. One, which recovered, was performed in a case of stricture of the pylorus following perforating ulcer. The remaining eleven were for the removal of cancerous growths; four of these recovered from the operation; out of the recoveries, three patients are still alive and free from any recurrence; the fourth is known to have died four months after the excision, from a return of the disease. Czerny's patient, referred to in *Internat. Med. Congress*, who gained eleven pounds within six weeks of the operation, was ten months after the operation quite well, with

no symptoms of recurrence of the disease.—*Maryland Med. Journ.*, July 1, 1882.

STRETCHING THE OPTIC NERVE.—The first attempts at stretching the optic nerve were made by Wecker; in one case without success, in the others the result has not been stated. KÜMMEL (*Deutsche Med. Wochensch.*, 1882, No. 1), by experimenting on animals, and on the cadaver, satisfied himself of the harmlessness of the operation, which consisted in passing a blunt spatula-shaped instrument through an opening in the conjunctiva at the inner border of the cornea to the point of insertion of the optic nerve, after tenotomizing the internus. KÜMMEL prefers passing a blunt strabismus hook in between the inferior and externus. In seven cases in which he performed the operation there were no serious consequences. Observations on the dead subject showed that tractions on the nerve produced an action spreading as far as to the entrance of the optic tract into the cerebral substance. In a patient who had been under treatment for a long time with iodide of potassium and strychnia, the stretching of the optic nerve produced an improvement. The other cases were unsuccessful, although the operation was not followed by any bad results. He recommends a trial of this operation in slowly progressing atrophies in which some qualitative light sensation still remains.—*Edinburgh Med. Journ.*, April, 1882.

A NEW FRACTURE OF THE ASTRAGALUS.—DR. SHEPHERD, Demonstrator of Anatomy at the McGill College, Montreal, has recently met with four specimens of a hitherto undescribed fracture of the astragalus. In each bone the injury consisted in the fracture of the outer projecting edge of the groove for the tendon of the flexor longus pollicis. In three of his specimens the union was fibrous, in the fourth it was bony. He has failed to produce the fracture experimentally, but he advances the view that it is produced by a twist of the foot outwards while in the position of extreme flexion at the ankle-joint, and further suggests that it may be one of the lesions in cases of severe sprain of the ankle-joint, and that it may account for the impairment of motion sometimes met with after what is believed to be only a sprain. All of his specimens were obtained from the dissecting-room, and he was unable to get any clinical history to throw light on the mode of production, or results of the injury. We should imagine that the diagnosis of this injury would be very difficult, if not altogether impossible.—*Lancet*, July 1, 1882.

THE ABSORPTION OF IODOFORM.—In view of the great discrepancies as to the fatal dose of iodoform, ZELLER undertook some experiments to determine how much and how rapidly iodoform was absorbed, and gave his results at the meeting of the Congress of German Surgeons at Berlin on June 1, 1882. Various opinions are held as to the changes which iodoform undergoes when absorbed, Moleschott believing the effects to be due to nascent iodine, Benz to the union of iodine with a metal, and others to a compound of iodine and albumen. According to Zeller, who estimated the iodine excreted through the urine, iodoform is only slowly and imperfectly absorbed from the intestine, while its excretion may last more than three weeks. It is rapidly absorbed from the abdominal cavity, under which conditions the bile coloring matters are also found in the urine, accompanied by severe toxic symptoms which are equally severe when the iodoform is applied to the surface of wounds: as iodoform accumulates in the blood it produces a cumulative action, so its results cannot be foretold. Iodoform is no more soluble in serum than in water.—*Deutsche Med. Woch.*, June 17, 1882.

ACTION OF ALCOHOL ON DIGESTION.—BUCHNER (*Deutsche Arch. f. klin. Med.*, xxix. p. 537) has made a series of experiments on this subject by adding alcohol to artificial digestive fluids in a flask, and also by washing out the stomach six hours after a meal, and ascertaining what proportion of the food remained undigested when alcohol had been given or not given along with the food. He finds that alcohol up to 10 per cent. strength has no influence as such upon artificial digestion. When added so as to form 20 per cent. of the digestive fluid, it slows artificial digestion. In larger proportions it completely arrests it. Beer when undiluted completely stops artificial digestion, and when diluted slows the process. Red and sweet wines have a similar action, while white wines even when undiluted only slow digestion. Both beer and wine hinder digestion in the stomach even in small quantities. When the processes of absorption and secretion are already disturbed wine and beer may completely arrest digestion. They should, therefore, be given with the utmost caution or completely withheld in cases of gastric catarrh.—*Practitioner*, July, 1882.

THE CHOICE OF DRAINAGE TUBES.—M. NICAISE (*Rev. de Chir.*, Dec. 1881) points out the importance of using non-irritant India-rubber drainage tubes in the dressing of wounds. He gives the following directions:

The tube should be short and wide, and should not be in contact either with the bone or the ligature of the chief artery.

Tubes are gray, black, or red. They should be made from laminae of pure caoutchouc cut with the saw, vulcanized, and desulphurized. Good tubes may be recognized by (1) the transverse markings left by the saw; (2) their lightness—they should float on water; (3) their strength—they should bear being tripled in length without breaking.

Bad tubes are made from sheets of paste made up with shreds of caoutchouc, zinc white, minium, etc. If gray, they remain so after being dipped in an alkaline solution. Gray tubes have not been freed from sulphur, and this separates out and irritates the wound; they should be avoided. Red tubes, which have been desulphurized by soaking three hours in a hot 10 per cent. solution of carbonate of soda, may be safely used. Black tubes answering to the above tests are the best of all.—*Practitioner*, July, 1882.

INJECTIONS INTO THE SUBSTANCE OF THE LUNG.—DR. E. FRANKEL (*Centralb. f. d. Med. Wissen.*, June 10, 1882) has injected acetate of alumina, carbolic and boracic acids, and iodoform into the substance of the lungs of rabbits, by means of an ordinary Pravaz syringe, to which, in order to prevent hemorrhage, he had attached slender needles. The number of injections varied from one to six daily, this number being sometimes given on many successive days, at other times with a few days' interval. The animals were apparently very little affected by the procedure; some even gained in weight. After they were killed, there were found indications of extravasation, proliferation, and infiltration in the pleura, and in the lung tissue. These were all progressing towards recovery, either by absorption or by the formation of cicatricial tissue. The author suggests that in cases of disease of the apices, injections might with advantage be made both in the affected parts and in the healthy tissue adjoining, to change the character of the inflammation in the first situation, and in the second to increase its powers of resistance, and by the production of cicatrices, to lead to the formation of a barrier, which should arrest the extension of the morbid process. He recommends his method also in putrid bronchitis and gangrene of the lung. In the case of one patient, who expectorated

fetid sputa, he made six injections, using latterly 3 grammes of a 5 per cent. watery solution of carbolic acid; not the slightest reaction, not even a single cough, followed this little operation, but there remains the fact that the odor of the sputum was not in the least degree modified.—*Glasgow Med. Journ.*, July, 1882.

THE TREATMENT OF EPILEPSY.—Künze (*Neurolog. Centralb.*, January, 1882) treated thirty-five patients suffering from epilepsy, with completely successful results in nine of them, by means of curare. The published cases show that complete recovery occurred in very severe cases of epilepsy, even when the disease had existed for years, and the intellectual faculties had become affected. Acting upon these results, Prof. Edlesfen has investigated anew the effects of treatment by curare in certain grave cases of epilepsy, since the effects of treatment whether by the bromides or by atropia are not so entirely satisfactory as to render all other methods superfluous. He employed the formula recommended by Künze, filtering the solution before injecting it—Curare, 0.5 grammes; aq. dest. 5.0 grammes; acid. hydrochlor. gtt. 1, digere per xxiv. horas, de infiltrata. Of this solution, one-third is to be injected every five days; as a rule it neither causes much pain nor any noticeable reflex symptoms; in no case did it cause any toxic phenomena; still it is necessary to ascertain the trustworthiness of the preparation of curare before employing it. Two cases of hystero-epilepsy were not benefited by this treatment, whilst of thirteen cases of true epilepsy, the majority characterized as severe cases of old standing, six were not permanently improved, whilst three were completely, and, up to the present, permanently cured. Three other cases, although not cured, were distinctly improved, the attacks being interrupted for several months. One case is still under observation, and promises to be successful. Prof. Künze recommends that the treatment be given up if there be no sign of improvement after the fourth or fifth injection. (*Centralb. f. klin. Med.*, 1881; *Med.-Chir. Rundschau*, October, 1881.) Dr. G. Ferraud sums up the recent results of treatment with bromide of potassium at the Salpêtrière (Paris). The cases of eighty-nine female patients are analyzed as follows: 13 per cent. very greatly benefited; 15 benefited; 18 slightly benefited; 12 not benefited. Minimum daily doses of 5.6 grammes for women and 6.8 for men are recommended. Legrand du Salle continues to give the salt on six days of the week for the first three months after the fits have ceased for a year, and afterwards on three successive days in each week. Arsenic is found useful in acne produced by the bromide, and to avoid serious weakening of the memory coffee is ordered for all patients whose daily dose is more than 7 grammes.—*Cincinnati Lancet and Clinic*, July 15, 1882.

THE RADICAL CURE OF HERNIA.—SCHWALBE, of Margburg, read a paper on this subject at the Berlin congress of German surgeons, on May 31st, in which he recommended the already well-known method of injecting 70 per cent. alcohol into the neighborhood of the hernial sac, as entirely harmless and very effective, and he reported thirty cases in which a radical cure was effected. Occasionally it is necessary to repeat the injections very frequently, as many as one hundred and fifty having been used, especially when the horizontal position can not be retained; the hernia should be kept reduced during the treatment by a suitable truss. Schwalbe believes that this method is preferable to Heaton's, as in the latter the white oak extract, being less diffusive, must be injected directly into the sac.

RANKE stated that he had employed Schwalbe's method in more than one hundred cases, and was not very favorably disposed towards it: the injections are

always very painful and often leave serious infiltrations. There was no doubt that in children it would hasten the normal closure of the ring. GUSSENBAUER had employed this method in six cases, in none of which had a complete cure resulted.—*Deutsche Med. Woch.*, June 10, 1882.

THE SYMPTOMATOLOGY OF BRIGHT'S DISEASE.—M. DIEULAFOY lately called attention to certain symptoms of Bright's disease (parenchymatous and mixed nephritis), of which too little notice has, he thinks, been taken. The most important of them is frequency of micturition, a symptom which, although frequently associated with polyuria, may exist independently of any increase in the quantity of urine. In some cases the symptom is very troublesome; the bladder has to be emptied twelve or fifteen times a night, and twenty or twenty-five times in each twenty-four hours, and this although the total quantity of urine may not amount to a pint. This symptom Dieulafoy proposes to term pollakuria, and it may be manifested in three forms. 1. An early form may attend the commencement of the renal disease, of which it may be indeed the earliest manifestation and of considerable diagnostic significance. 2. A late form, which attends the chronic stage of the disease which has commenced acutely. 3. A form in which the symptom is attended with great pain and distress, and is accompanied by tenesmus and spasm of the sphincter ani, lasting from three to eight minutes. Another symptom is irritation of the skin. M. Dieulafoy asserts that it is met with in one-third of the persons suffering from "albuminous nephritis," whether interstitial, parenchymatous, or mixed, and that it is especially frequent in women. This symptom is also met with in different forms. Sometimes it has the character of ordinary pruritus, and may be thus the initial symptom of Bright's disease, preceding for months any other inconvenience. It has been explained by uremia, and has been attributed to an excretion of urea by the skin, but in one of his cases the symptom was not present, although a large amount of urea was excreted by the skin. In other cases the itching is much slighter, and is described as resembling the sensation produced by the contact of a hair with the skin. The last symptom to which attention was directed is that which is described by patients as the "fingers going dead." It is a sensation of formication or cramp, accompanied by such pallor that the part looks altogether exsanguine. It may last half an hour or so, and then disappear entirely. Rarely both hands are affected, and when it is bilateral and partial the area is always symmetrical on the two sides. It appears to be due to a true vaso-motor disturbance.—*Lancet*, July 1, 1882.

EXCESSIVE MOBILITY OF THE UTERUS.—GRASSI (*Lo Sperimentale*, Jan. 1882) thinks that this condition is much more frequent than is generally supposed, and is often mistaken for version. By itself, apart from other possibly co-existing alterations, it may give rise to manifold sufferings which increase with the rapidity and extent of the motions to which the uterus is subjected.

Excessive mobility of the uterus may be congenital; it may occur in nulliparæ; but usually it is due to laxity of the supports of the uterus, attributable to one or more child-births. In consequence of this condition, coition may become painful, conception be rendered more difficult, and pregnancy suffer interruption during the first three months.

The treatment consists in toning up the system, hydrotherapeutics, etc., and the application of a well-fitting ring-pessary. The diagnosis is to be confirmed by the immediate benefit derived from the pessary.

The author emphasizes that the condition is a purely clinical one.—*Am. Journ. of Obstet.*, July, 1882.

BONY OCCLUSION OF BOTH POSTERIOR NARES.—DR. T. B. WILKERSON reports a case of congenital occlusion of the posterior nares by a bony septum, in a child six years of age, which he perforated by means of a new and ingenious instrument, a revolving trocar and curved canula, the drill attached to cable-screw wire; the latter being elastic, allows the handle of the trocar to be circularly rotated, whilst the curved canula remains stationary, the slit in the posterior under surface of the tube and pliability of the wire render the retraction and withdrawal of the trocar easy. The drill point protrudes beyond the end of the canula half an inch, length of trocar and canula about four inches, length of handle two and a half inches; without this instrument the operation would have been impracticable. A very satisfactory result was obtained.—*North Carolina Medical Journal*, June, 1882.

A CASE OF PARTIAL RESECTION OF THE TEMPORAL BONE.—At the meeting of German surgeons in Berlin, on June 1st, GLUCK stated that, after having opened the carotid canal fifteen times on the dead body, he finally had an opportunity to perform the same operation on the living subject. The case was that of a man who had suffered for seven years from otorrhoea from the left ear, who, after being exposed to cold, was attacked with violent headache, convulsions, coma, facial paralysis, and collapse, with severe hemorrhage from the ear. A diagnosis of suppuration on the petrous portion of the temporal bone, and corrosion of the carotid artery was made; after an appropriate incision through the skin, the mastoid process was carefully chiselled away and the dura mater exposed and incised, when thirty grammes of pus escaped. The seat of the hemorrhage was not detected: the patient died. —*Deutsche Med. Woch.*, June 17, 1882.

INCONTINENCE OF URINE IN THE FEMALE.—DR. FRANK, of Cologne (*Centralbl. f. Gynäk.*, March, 1882), has planned and practised a new operation for the relief or cure of cases where the sphincter vesicæ has been so injured as to lead to incontinence. He points out this condition often exists after a fistulous opening in the bladder has been closed, and that such cases are very difficult to manage. He treats the urethra as one would an over-dilated rubber tube, by cutting a piece out of its circumference, so that less contractile power is sufficient to close it. A narrow strip is cut out of the whole length of the urethra, rather more tissue being removed at the seat of the sphincter. The sutures are not to be taken out till about the eighth day. A case is given where this method was successfully followed.—*Glasgow Med. Journ.*, July, 1882.

COMMUNICATION OF THE STOMACH AND INTESTINE WITH THE PLEURAL CAVITY AND A FECAL ABSCESS.—Dr. Tielmans reports a case of this character in *Arch. f. klin. Chirurg.*, occurring in a boy fifteen years of age, who was tapped for pyo-pneumothorax; cure resulted in five months.—*L'Abeille Méd.*, July 10, 1882.

GANGRENE OF THE BLADDER FROM RETROVERSION OF THE GRAVID UTERUS.—The last number of the *Archiv für Gynäkologie* contains an interesting article on the above subject, by DR. G. KRUKENBERG, of Bonn. He points out that cases of rupture of the bladder, and of gangrene of the bladder, from retroversion of the gravid uterus, are identical in their pathology. When gangrene of a portion of the vesical wall takes place, its peritoneal surface may be, or may become, adherent to neighboring parts, and in

that case the gangrenous bit (or layer) may be cast off, entire or broken up. If no adhesion be present, and the bladder be subject to distention, its wall will give way at the weakened spot; or the separation of the slough may lead to perforation, even without over-filling of the bladder. Dr. Krukenberg has only been able to collect ten of these rare cases, and to these he has added one observed by himself. The practical conclusions which he draws from them are these: When the catheter has been employed and the uterus replaced before the sixth day, exfoliation of a portion of the vesical wall has never been observed. If regular catheterization is begun before the tenth day, rupture of the bladder need not be feared. When retention of urine persists longer than this, either gangrene or rupture of the bladder may supervene, rupture being the more frequent. Rupture of the bladder may also take place suddenly, from great distention of the bladder, or from efforts even most carefully made to replace the uterus. If gangrenous portions of the vesical wall are cast off, it should be an indication to abstain from attempts to replace the uterus (lest rupture of the bladder should take place), and to treat the case by the induction of abortion.—*Med. Times and Gazette*, July 8, 1882.

A MODIFICATION OF THE VAGINAL TOTAL EXTRIPATION OF THE UTERUS.—Freund's operation has been placed in the background by the vaginal method of total extirpation of the uterus, but even the latter is not free from difficulties; especially the ligation and separation of the first broad ligament are laborious and tedious. Experience shows that the second ligament is always more easily disposed of than the first, because the uterus is separated from the first broad ligament, and can be drawn in front of the external genitals. P. Mueller (*Centralbl. f. Gyn.*, No. 8), therefore, proposes to make the ligation and division of the first ligament as easy as that of the second by in some way splitting the uterus, either inverted or simply drawn downward, into two symmetrical parts in a vertical direction. Then each half with its ligament can be easily drawn down and the first ligament as readily tied as the second. Hemorrhage cannot be considerable, there being no larger vessels to be divided; moreover, the division can be effected so rapidly that in any event the bleeding cannot long continue, or the halves may be compressed manually or the ligaments rendered tense by traction or torsion until the ligature has been applied.

The author has not had occasion to test the value of his theory in practice, but hopes that some one of his confrères may give it a trial.—*Amer. Journ. of Obstet.*, July, 1882.

RESECTION OF THE STOMACH.—At the Congress of German Surgeons in Berlin, in the discussion on this subject, it appeared that out of eighteen cases which had been operated on for resection of the pylorus, only three yet lived. Prof. Richter thought that a much less dangerous operation in the case of fibrous stricture would be to make a duodenal fistula through which the stricture could be dilated with bougies. To this Rydiger replied that all of the three cases on which he had so operated had died. Billroth said that only one in fifty or sixty cases of carcinoma of the stomach was suitable for operation, and the first case in which he attempted the resection the tumor proved to be a myxoma, and the operation was abandoned. He had made as many as twenty exploratory incisions in as many cases, and at no time with a fatal result.

Gussenbauer was of the opinion that the cases of fibrous stricture were much more favorable for operation than carcinomata.—*Deutsche Med. Woch.*, July 1, 1882.

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SOME TROPHIC LESIONS.

THAT certain areas of nervous matters have an intimate relation to the nutrition of parts innervated by them, is evident. Irritation or disease of such "trophic centres," as they are called, is followed by wasting or degeneration. Although not all of such supposed centres have been accurately defined, the facts warrant the location of one in the fourth layer of the cerebral cortex, one in the anterior cornua, and one in the gray matter of the posterior columns of the spinal cord. The special peculiarity of the anatomical elements in these trophic centres is the presence of the multipolar ganglion cell.

There appear to be trophic fibres as well as centres, or at least sensory fibres endowed with a trophic function. Injury or disease, even irritation, of these fibres, quickly affects the nutrition of the parts in anatomical association with them. The great fifth nerve offers us an admirable example of this endowment. It is well known that irritative or destructive lesions of the trigeminus will be followed by inflammation of the eye, ulceration of the cornea, eczemas and herpes of the skin of the face, etc. The history of these facts regarding the trophic functions of the fifth is interesting as showing the changes of opinion which have taken place. When the influence of the nervous system on nutrition came to be known, the condition of the eye following division of the fifth nerve, was referred to the injury done to the trophic fibres. Then came a period of doubt, finally of denial. It was shown—it was supposed—that the disease of the eye which occurred under these circumstances, was the result of mechanical causes; that particles of dirt adherent to the cornea and other injuries brought on the mis-

chief witnessed, and that if the lids were sewn together to protect the eye properly, no lesions of any kind followed division of the fifth. For a time this demonstration was regarded as final, and the fifth ceased to be regarded as a trophic nerve. Recently, however, the subject has been examined afresh, and new and more accurately conducted experiments have demonstrated that no amount of care in protecting the eye from injury will prevent destructive lesions of this organ following injury to the fifth nerve.

The late war furnished numerous examples of the results which succeed to injury of the trophic nerves, and much of the information on this subject, now current, had its origin in the admirable monographs which record these observations. Experimental evidence has not been wanting, and the clinical experience is constantly enlarging, so that, now, trophic lesions from injury or disease of the nerve-trunks are amongst the most obvious of pathological facts.

The spinal trophic centres have been localized by disease. It was first observed that in some cases of paraplegia, rapid wasting of the paralyzed muscles and decline in their faradaic excitability occurred soon after the onset of the disease; and in other cases of paraplegia, no change ensued in the condition of the muscles. It was subsequently found that in the former the disease involved the anterior cornua of the spinal cord, especially of that part containing the multipolar ganglion cells. Several diseases exhibit these changes in perfection—notably *poliomyelitis anterior acuta* (infantile paralysis), *glosso-labio-laryngeal paralysis* (chronic bulbar paralysis), *progressive muscular atrophy*, etc. As disease of this group of cells in the anterior cornua has for its constant result wasting of the paralyzed muscles, the trophic centre is accordingly located there. It is a curious fact, however, that certain osseous, and also cutaneous, lesions proceed from disease of the gray matter in the posterior columns of the cord, about the apparent origin of the posterior nerve-roots. Some of the most interesting trophic lesions, having their origin in this part of the cord, occur in the course of *posterior spinal sclerosis* (progressive locomotor ataxia). Changes in the joints occur not unlike those which are due to some kinds of rheumatism. Facts like this strongly support the theory of the nervous origin of acute rheumatism. In locomotor ataxia, the changes are profound; the joints are deformed by alterations in the bones themselves, and luxations readily occur; the animal matter of the bones decreases, and hence fractures take place with little violence. A similar change in the bones is now known to occur in the chronic insane, and in this fact is the explanation of the fractured ribs which are so often

found after the death of troublesome subjects. In advanced cases of tabes, fractures occur spontaneously, by muscular action, merely, without any violence, and a number may happen in the same individual, as in the case narrated by Charcot of a tabetic woman who suffered several times dislocations of the hip and shoulder, and fractures of the extremities, dying at last by the rupture of an aneurism of the aorta. We should not, of course, fail to mention the fact that the first account of spontaneous fracture in the subjects of progressive locomotor ataxia appeared in the *American Journal of the Medical Sciences*, July, 1873, from the pen of Dr. Weir Mitchell.

The slowly-developing morbid alterations consecutive to lesions of the gray matter about the posterior roots, offer a strong contrast to those rapid changes which take place in the muscles when the multipolar ganglion cells of the anterior cornua are affected by disease. There is, as would indeed seem to be necessary, a constant ratio in the progress of the centric and peripheric alterations. In infantile paralysis the mischief done in the nerve-cells is accomplished in a few days; in locomotor ataxia the gelatiniform degeneration of the posterior columns occupies as many, or more, years. The whole round of an acute herpes zoster will occupy about two weeks, whereas certain pigment changes, as in a form of vitiligo, may be distributed over many years.

Besides those trophic affections in which an immediate relation between the central and the peripheral disease can be traced, there are, doubtless, many of reflex nature which cannot be directly connected. We know, of course, what decided vascular changes are effected by reflex irritation, but the mistake should not be made of confounding vaso-motor with trophic affections. A good illustration of a reflex trophic lesion is afforded by the ulcer of the duodenum, caused by a burn of considerable extent on the chest or abdomen. As all the world knows, the relation between these two conditions is, by many, regarded as accidental rather than causative, and hence its pertinency as a fact in this connection may be denied. There is, however, a causal relation, of the reflex kind, between a burn of the surface and a low form of pneumonia, which must be admitted to exist.

DR. KINLOCH'S CASE OF FATAL CHLOROFORM NARCOSIS.

THE announcement of another death from chloroform is of such frequent occurrence that it no longer excites any other remark than, why was not ether given? Notwithstanding the formidable list of fatal cases from chloroform narcosis, there are many physicians who cannot bring themselves to use any other anesthetic. Chloroform, compared with other

anesthetics, notably with ether, is so much more pleasant to inhale, so much more prompt in action, and in some other respects so much more desirable, that these physicians are disposed to adhere to their favorite, rather than encounter the discomforts of other agents which may seem to be safer. The question of safety must, after all, be the prime consideration. Is ether so distinctly safer than chloroform that it must be preferred, notwithstanding it is far less agreeable? The comparison of an immense number of exactly parallel cases can alone decide this question. With the increasing use of ether, the number of deaths caused by it becomes greater. If yet greatly less than those caused by chloroform, it must be remembered that ether has been used in a considerably less number of cases. That the condition of anesthesia is in itself a condition of danger, irrespective of the agent used to induce it, remains a fact, in spite of the improvements in the technical processes. To suspend the functions of animal life, and at the same time to enfeeble the organic functions, induces a state of such constraint, that little more is required to end life. Although there are differences in the toxic activity of the various anesthetic agents, it yet remains to be demonstrated that ether is distinctively, under all circumstances, an absolutely safe anesthetic. Assertions in regard to the superior safety of ether are abundant enough, but these are not demonstrated facts. For our own part, we prefer ether, not for itself, but because a general conviction exists that it is safer, a view in which we share, although the proof is not yet conclusive.

Dr. Kinloch, having used chloroform for years without an accident, and preferring its action to that of any other anesthetic, was warranted in continuing to employ chloroform, provided there was suitable care exercised in the selection of the subject and in the administration of the vapor.

The method of inhalation used by Dr. Kinloch is as old as the practice of modern anesthesia. An open cone formed out of a towel, and large enough to cover the mouth and nose, has been employed in millions of cases without accident. It was first proposed by Simpson, and has been used more than any other inhaler. Notwithstanding the antiquity of this practice, and although sanctioned by usage, we must condemn it as unsafe, as it is unscientific. When such a cone is placed over and above the nose and mouth, although several inches removed, the vapor of chloroform displaces the air, and hence, in a little while, only chloroform vapor is inhaled. If the rule, to use an admixture of chloroform vapor and air, in which the former is not in greater proportion than $3\frac{1}{2}$ per cent., is a sound one, it is clearly violated in this arrangement. When the cone is first placed in position, after

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being charged with chloroform, or after any addition of the anæsthetic, the air supplied to the patient is composed for the most part of chloroform vapor. Now, as the density of chloroform vapor is about four times that of atmospheric air, it is clear that the latter must be displaced more or less completely—probably for a time entirely—when the inhalation is thus conducted. Therefore, although Dr. Kinloch pursued the most usual mode of administering the anæsthetic, we regard the method as in a high degree unsafe, since it is necessary in the giving of chloroform to secure the admixture of air in right proportions. The proper proportion of the anæsthetic vapor to the air is three and a half per cent., and it is in the highest degree important to comply with this rule in the administration of chloroform. That Dr. Kinloch may have failed to secure a sufficient admixture of air, is quite possible, but there is an enormous experience to justify and uphold the method he pursued.

The measures of resuscitation practised have abundant sanction in professional usages. We venture a criticism on one point—the subcutaneous injection of brandy. This practice, now so common, is certainly improper in the case of cardiac failure from chloroform, ether, chloral, and other agents, derivatives of alcohol. Whilst all of these derivatives have peculiarities of their own, they have one effect in common—they all, after a period of excitement of longer or shorter duration, cause cerebral depression, and brandy is, so far, synergistic to chloroform vapor. As in this case, the heart and lungs labored, the superficial venous trunks being greatly distended, the subcutaneous injection of amyl nitrite, or of atropia, would have served a more useful purpose. We make these suggestions in the interests of those who may, at some future time, experience a similar misfortune, and not as a criticism of Dr. Kinloch, who, in the method of resuscitation, as in the administration of the anæsthetic, acted in accordance with the general professional experience. We are also bound to admit, that the practice of Dr. Kinloch may be supported by many more than will approve our own suggestions.

It is gratifying to note that the South Carolina Medical Society have ranged themselves on the side of Dr. Kinloch against the enemies who seek, in such a misfortune, to ruin the physician. It appears that the unfortunate case has found a hearing in the newspapers, and the physicians connected with it are judged with that severity which only malice, guided by the most profound ignorance, can suggest, and that which in itself is but an accident, which may happen to the wisest and most prudent medical man, is made to wear the aspect of an unprecedented blunder. It is, therefore, with real pleasure that we read the loyal and manly words of the com-

mittee appointed to draft resolutions to express the sentiments of the physicians composing the South Carolina Medical Society. The members of the medical profession may usually be depended upon to support a colleague if merely unfortunate. Nor is this only what Mr. Spencer calls "professional bias." They have sympathy for misfortune, and an honest detestation of those misrepresentations that would injure, if not destroy a reputation which is at the same time the evidence of work well done, and the promise of future prosperity. We unite with the profession of South Carolina, and of the whole country, in extending sympathy to Dr. Kinloch for this unpleasant accident, and for the injurious criticisms to which he has been subjected.

THE CHEYNE-STOKES RESPIRATION.

A CORRESPONDENT calls our attention to the term "Cheyne-Stokes breathing" as in frequent use, but in regard to which, readers are generally in the dark as to its meaning. He has looked for information on the subject through the ordinary sources of knowledge, and now asks our aid in clearing up the mystery. We enter on this task the more readily, since we have offended by the use of this mysterious phrase, and because it is a topic of interest apart from the apparent difficulty of its explanation.

The phrase—Cheyne-Stokes respiration—means, of course, the kind of breathing described by Drs. Cheyne and Stokes. The first reference to the peculiarity was made by Dr. Cheyne, so long ago as 1816. Dr. Stokes recalled this fact to the attention of the medical profession, in his classical work on diseases of the heart and aorta, thirty years afterward. He also contributed some additional facts, and hence his name is rightly honored by association with Cheyne's in this suggestive phrase—Cheyne-Stokes breathing.

The condition signified by this phrase is a peculiar irregularity of breathing, associated with certain morbid conditions. Not all kinds of irregular breathing can be so designated. Indeed, the term is already mis-used, and there is a growing disposition to include under it all kinds of breathing associated with irregularity and sighing. As described by Cheyne and afterwards enlarged upon by Stokes, the kind of respiration to which this phrase is properly applicable, consists in the following phenomena: A pause in the breathing—a complete suspension in the respiratory acts for a period of time, during which breathing might occur several times in the normal manner; then the resumption of respiration very feebly and slowly, and a gradual and progressive increase in the number and depth of the respirations, until the maximum is reached; and then again a gradual and progressive diminution, in the same order, in the number and depth of the

respirations, until a pause occurs. Thus the movements of respiration oscillate; from an extreme in which all the muscles are laboriously engaged, to a minimum in which the respiratory organs seem hardly to act at all, and then a period of repose or of apnoea of longer or shorter duration; to be followed again by the gradual rise to the maximum. During this time of cessation of breathing the arterial tension falls, the pulse quickens, the pupil contracts, there occurs a lateral conjugate deviation of the eyes, the face becomes pale, and the mind—the intellect and the general sensibility—are for the moment obtunded. On the other hand, during the period of maximum activity in the respiration, the arterial tension rises, the pulse slows, the pupil dilates, and more or less cyanosis of the face and extremities appears.

The morbid states with which Cheyne-Stokes breathing is associated consist of certain chronic affections of the heart and arterial system. Stokes laid much stress on it as a sign of fatty degeneration of the heart. It has been observed in cases of aortic insufficiency, especially when caused by the calcareous deposits of senility. The first case described by Dr. Cheyne was one in which atheroma of the vessels led to attacks of cerebral hemorrhage. Chronic arteritis, arteritis deformans, and cardiac lesions arising under the same conditions, are the chief factors. The irregularity of breathing which belongs to tubercular meningitis has been said to have the Cheyne-Stokes type, but there is merely distant resemblance—by no means identity. The irregular respiration occurring in the course of the nervous symptoms of chronic albuminuria approaches more nearly in characteristics to the Cheyne-Stokes breathing; but here again there is resemblance, but not identity.

Cheyne-Stokes breathing is of evil omen, as a rule. This view of its prognostic value is a necessary corollary from its pathogeny. Due to changes in the arterial tunics, which interfere with the normal supply of blood to the medulla, the respiratory centre functionates in a spasmoid manner. The special rhythm of the respiration, which it is the office of the respiratory centre to maintain, is, under these circumstances, perverted. The irregular evolution of the rhythmic force signifies the onset of fatal symptoms, for the damage done to the walls of the vessels must continue in an increasing degree to interfere with the circulation in the medulla. The numerous examples of irregular respiration, bearing a more or less close resemblance to the genuine Cheyne-Stokes breathing, have a prognostic importance determined by the associated and causative lesions.

THE SUMMER CHARITIES.

No one feature of our civilization is more striking than its charities. The lame and the halt, the sick and the wounded, and even the incurable are cared for with a kindness and tenderness unknown to heathenism. Of all these, however, the latest developed are in many respects the most remarkable. Hospitals are charitable necessities, but the summer charities, if we may so call them, are, as it were, charitable luxuries.

One of the earliest was the Children's Seashore House at Atlantic City, and any one who has seen the results in health and happiness there attained, must have felt that it was a happy thought that led to so much good. Similar in idea, but reaching a different class, is the Seaside Home for Invalid Women. The physicians whose poor patients have been at either of these homes, appreciate to the full the boon conferred upon them. To the weary, over-worked shop girl the cottage of the Women's Christian Association at Asbury Park, well named Sea Rest, is open, and hundreds enjoy there a week or two of restful, refreshing holiday. All of these charge merely nominal rates, made possible by the gifts of generous friends, and thus make them available for any of the honest, hard-working, and thrifty, whose purses, nevertheless, would not otherwise allow of such an expense.

Another similar form of hygienic charity, and, in its way, quite as delightful, are the various excursions especially for children, who in our close cities suffer daily, though often unperceived, martyrdom. These are often only for a day, it is true, but the good done by a single day's outing to a poor little city boy or girl, who has scarcely ever seen a green field or an unstunted tree, is greater than we think. It is to such a child an immense event, talked about for months afterwards—well-nigh a perennial pleasure, as well as a physical boon. The St. John's Guild and other similar societies are doing good service by such excursions. The Children's Country Week Association, and the *Tribune's* Fresh Air Fund, aim at a longer holiday, and are doing a vast deal of good, how much in the case of the former we have but lately pointed out.

Apart from all the good moral influences attached to such charities—and no one can read the letters to the *Tribune* without seeing that it is indeed twice blessed, and blesseth him who gives as well as him who takes—they are, from the physician's standpoint to be commended and fostered. Of course, harm is occasionally done by over-play or other indiscretions, but the healthful influences far outnumber the harmful. Many a life has been saved, and many another one prolonged and brightened, by the blessed summer charities.

TRANSACTIONS OF STATE MEDICAL SOCIETIES.

It is usually the case that the annual volume of State medical society transactions is delayed in passing through the press until the papers have lost their freshness, and the interest in their contents is dissipated, and this delay, strangely enough, is generally the fault of the contributors themselves, but if the society's welfare did not thereby suffer, perhaps no one would complain. The Michigan State Medical Society has just set a good example by issuing its annual volume of three hundred pages in a little over two months after adjournment, and we congratulate the Society and its efficient Secretary, Dr. George E. Ranney, of Lansing, upon being the first in the field with this year's proceedings.

SOCIETY PROCEEDINGS.

AMERICAN OTOLOGICAL SOCIETY.

Fifteenth Annual Meeting, held at Lake George, July 25, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE Fifteenth Annual Meeting of the American Otolological Society was held at the Fort William Henry Hotel, Lake George, N. Y., on Tuesday, July 25, at 10.30 A. M., the PRESIDENT, DR. J. ORNE GREEN, of Boston, in the Chair.

There were present twenty-nine members, and four by invitation, who were requested to participate in the discussions. Four new members were elected in the Society, and the names of five candidates for membership were referred to the proper Committee.

MORNING SESSION.—After transacting the ordinary routine business, the Business Committee of the Society reported the bulletin of papers to be presented, in the following order:

DR. O. D. POMEROY, of New York, read a paper on

DRAINAGE TUBES IN SUPPURATIVE OTITIS MEDIA.

In children it is often observed that in suppurative otitis media the meatus becomes so narrowed that it is difficult or impossible to cleanse or treat the ear. Incisions of the meatus to enlarge the calibre had failed; incisions behind the auricle to open into the tympanum had also failed, when a small tube of India-rubber was introduced into the meatus. When the canal was nearly closed it became necessary to pass a probe through the rubber tube, catching it upon its end and stretching it, so that its size was nearly reduced to that of the probe, in which condition it could easily be passed in the canal well down to the tympanum. When in position the rubber was allowed to resume its natural form, which it accomplished by drawing itself into the canal when the probe was withdrawn. After wearing these for two or three days, larger tubes became necessary, which often could be introduced without the aid of a probe. If granulations or polypus of the tympanum required treatment after the canal became dilated, the tubes were removed for this special treatment, after which they were returned. The reason for the successful treatment by these tubes is, 1st, the protection afforded the walls of the meatus from the aqueous discharge; and 2d, the gentle pressure of the elastic and dilating rubber tube. By this pressure granulations or polypi rapidly disappeared. Cases which had defied other means of treatment rapidly recovered in three to six weeks with very few relapses.

The best instrument for the introduction of the tubes was a cylindrical probe with four deep notches made in its extremity. A few illustrative cases were given.

DR. MCKAY, of Wilmington, Del., asked if the cases had been followed up, and if relapses had occurred.

DR. POMEROY answered that relapses had occurred, but less than with other methods of treatment. He purposely avoided making holes in the side of the tubes, so as to isolate the walls of the meatus entirely from pus.

DR. ORNE GREEN praised the ingenious way proposed to produce drainage, pressure, and dilatation. He had used pledges of absorbent cotton with glycerine, with good success, though the action was slow. The proposed method offered great advantages on account of its roundness, its elasticity and smoothness. In the treatment of such cases, however, drainage was not the most important; the chief aim to be desired was dilatation and pressure.

DR. POMEROY said that the irritation of the walls of the meatus depended upon pus, hence drainage became a very important factor in the treatment.

DR. SEELY, of Cincinnati, inquired what length of time it required to bring about dilatation.

DR. POMEROY answered, from two to six weeks, while every two or three days larger tubes could be employed.

DR. SEELY had not had special difficulty in treating cases of narrowing of the meatus by the cotton and probe. He felt certain that swelling of the meatus was due to the irritating effect of the discharge.

DR. HOWE, of Buffalo, said that he fully appreciated the advantages of the method as a means of dilating the canal, when contracted as described in the paper. He did not understand how such lateral pressure upon a polypus was any better than the usual methods of treating these growths. Immediate removal certainly produced the desired effect much more rapidly, and in doing so we gain also the enlargement of the canal.

DR. KNAPP, of New York, has used for the purpose of preventing retention of pus and closing of the canal, perforated flexible silver tubes with a flange. They are easily introduced and removed, cleansed and renewed. They may be worn for hours, days, or weeks constantly or with intermissions, according to circumstances.

DR. KIPP, of Newark, has found that, in cases like those spoken of by Dr. Pomeroy, deep longitudinal incisions will remove the swelling of the external canal usually very speedily.

DR. A. MATHEWSON, of Brooklyn, reported

A CASE OF ABSCESS OF CEREBELLUM, FOLLOWING OTITIS MEDIA MONTHS AFTER APPARENT CURE.

A case of chronic suppurative inflammation of middle ear, with mastoiditis, in a child of eleven years, apparently perfectly and permanently cured for months, when, after indiscretion in diet, vomiting occurred and other symptoms, which seemed at first due to gastric and hepatic disorders. After two weeks, during which there were no marked or certain symptoms of brain complication, the child died in convulsions, and an autopsy revealed abscess of cerebellum. There was pus between dura and tegmen tympani, but the bone was not carious. The ear and mastoid seemed healthy.

DR. KIPP thought that the value of ophthalmoscopic examination in cases of suppuration of the middle ear was not yet fully appreciated. Since the publication of his paper on this subject, he had seen several cases of purulent otitis media, in which double optic neuritis was present, and, as far as he could now remember, death occurred in all of these cases, the operation for perforation of the mastoid process having been refused. Although absent in many grave cases of this kind, the

presence of optic neuritis must remove all doubt that the brain or its membranes are involved in these cases.

DR. ORNE GREEN inquired if there did not exist any symptoms, like headache, before the attack came on, which might have been indicative of some occult trouble in the brain.

DR. MATHEWSON answered, that no such symptom occurred, and he congratulated himself that the patient had been getting on so perfectly well.

DR. ORNE GREEN then mentioned a case where the patient had appeared to be entirely well from his ear trouble for six months; only moderate headache would appear intermittently. At the end of that period, sudden death occurred, caused, as he believed, by rupture of an abscess of the brain. He asked Dr. Mathewson if there was any apparently normal brain substance between the abscess and the bone.

DR. MATHEWSON replied there was.

DR. KNAPP observed that; since Dr. Kipp drew the attention to the occurrence of optic neuritis, dependent upon suppurative otitis, he had ophthalmoscopically examined every case of severe otitis purulent media that had come under his observation. He found that this combined occurrence was quite rare; but in some cases it is very marked and important, as in acute cases of suppuration with internal mastoiditis. It is found more pronounced in the eye of the same side than in the other. After the opening of the mastoid, the retrogression of the optic neuritis went *pari passu* with the progress of the recovery from the ear disease. He related a case in illustration of which he said: when the mastoid was opened, and a large quantity of pus evacuated, a place at the cranial side of the cavity was found soft on probing.

DR. C. S. MERRILL, of Albany, reported

A CASE OF ACUTE MIDDLE-EAR INFLAMMATION, WITH DEATH ON THE FOURTH DAY, FROM EXTENSION OF THE DISEASE TO THE BRAIN.

A man, thirty-two years of age, consulted Dr. Merrill on November 7, 1877, complaining of a sense of fulness in the right ear and impaired hearing. The membrana tympani was found somewhat congested, otherwise normal. H. D. watch R. $2\frac{1}{2}$ "; L. 7". Politzerized the patient two or three times, which increased hearing of watch to 4", and further advised application of a leech to inner surface of tragus, and one to the mastoid, close behind the auricle, and daily Politzerizing. He did not see the patient again till the 10th; then learned that the leeching had entirely relieved the condition, so that on the next day (8th) the fulness had disappeared and hearing had become normal, and the patient went to his office, contrary to the orders of his physician. At 5 A.M. of the 9th, he was seized with severe pains, for which anodynes were administered, and on the following day Dr. Merrill was called in to see the case again. He found the patient suffering from severe meningitis; pulse, 160; temperature, $103\frac{1}{2}$ "; respiration, 28; delirious most of the time; membrana tympani bulging and greatly inflamed, as were the deeper portions of the auditory canal. A free incision of the membrana tympani, which was unusually thick and firm, evacuated a large amount of pus. The Eustachian catheter was used, and air passed freely through the incision. At noon of the 11th, the local inflammation of the ear greatly subsided, but the meningeal inflammation increased in spite of all treatment. Coma and death occurred at 6 P.M. Autopsy, eighteen hours after death: Evidences of meningitis and pus were found over the region of the petrous portion of the bone. There had been perforation through the roof of the tympanum, and underneath the dura were found a few drops of greenish-looking pus. The perforation of the tegmen tympani

consisted of two or three small openings. There was no necrosis. No evidences of inflammatory product in the bone itself.

DR. NOYES inquired if the patient had ever suffered from vertigo.

DR. MERRILL replied he had never before complained of his ears, but at the autopsy the membrana tympani were found very thick, and he had no doubt they had always been so, so that the existence of former ear disease was not improbable.

DR. PROUT spoke of the necessity of early incisions, as proved by the case reported.

DR. THEOBALD, of Baltimore, thought the case described by Dr. Merrill one of those in which active constitutional treatment was indicated. The liberal administration of calomel might have given the patient a chance of recovery. In reply to Dr. Merrill's question: "Could anything have been expected from it after the manifestation of such severe cerebral symptoms as described?" Dr. Theobald referred to the case reported by Dr. Buck in his work upon the ear, where the patient was in a comatose condition from meningitis supervening upon acute middle ear inflammation, and yet the liberal administration of calomel with injections of oleate of mercury was followed by rapid recovery. He also mentioned cases of his own recently published, which illustrated the good effect of this treatment under such circumstances.

DR. POOLEY, of New York, asked if Dr. Merrill thought it was good practice to inflate in acute and subacute inflammation of the middle ear.

As joining the discussion on this and the preceding papers, DR. READ J. MCKAY read a short paper on

AURAL POLYPUS, FACIAL PARALYSIS, MASTOIDITIS, AND CHRONIC MENINGITIS, WITH RECOVERY FROM THE TWO LATTER.

A case of a man, aged 22 years, who had been suffering seven or eight years from a running from the left ear, the result of a blow with the fist received eight days before the occurrence of pain and discharge from the ear. Lately there had been occasional bleeding. Examinations revealed the existence of a polypus, nearly filling the auditory canal, which was removed with Blake's snare, and the stump touched with a 3ij sol. of nitr. arg. Local treatment: instillations of sol. zinc. sulph. and acid. carbol. after syringing the ear. This treatment was persisted in for some time without removing entirely the granulations. The application of nitr. arg. produced considerable pain. He ceased coming for some time, and when he returned five months after, stated he had suffered from gastric fever. There was then left facial paralysis and continued pain in the left ear and the left side of head, relieved somewhat by the application of warm water and 3ij sol. arg. nitr. Four weeks later the patient reappeared, having been treated in the mean time by his family physician for "malarial neuralgia" for which quinia was freely administered. He looked very pale and weak, left mastoid swollen and tender. Leeches afforded prompt relief, and they were repeated ten days later; there remains constant pain in the head, with such continuous nausea and frequent vomiting that he could not retain nourishment. This was finally stopped by hypodermic injection of one-third grain of morphia. Ophthalmoscopic examination revealed the presence of well-marked left optic neuritis, and congestion of right optic disk. Minute doses of calomel were given, one-tenth grain every few hours, until slight ptysis occurred. A gradual change for the better then took place, pain and tenderness over the ear and in the head disappeared, the swelling of the inner extremity of the meatus decreased, vision improved, and optic neuritis subsided. But the facial paralysis still

continued, also the discharge from the ear, and the granulation tissue could not all be removed. The question arises in his mind, when optic neuritis is found in these chronic aural cases with the persistent pain, usually indicative of meningitis, whether the optic neuritis is due to meningitis alone or to meningitis with brain disease.

DR. E. E. HOLT presented a paper on

BOILER-MAKERS' DEAFNESS AND HEARING IN A NOISE. The opinion advanced by Dr. Holt upon "boilermakers' deafness" and "hearing in a noise," was based upon the examination of forty men from the shops for making steam-boilers at Portland, Maine, and of all those who made the claim that they could hear better in a noise, amounting in all to over one hundred cases that had been examined, the investigation showed that the deafness incident to the boilermakers was due more to the effects of the occupation upon the conducting apparatus of the ear than to the perceptive parts of the same organ, since they heard the tuning-fork, as a rule, as long or longer than the normal ear, even with the external auditory meatus closed. All men engaged in this occupation become more or less deaf, the degree and length of time elapsing before this occurs depending largely upon the tendency of the middle ear to catarrhal inflammation, which was excited by constant movements of the ossicles, and which, affecting the delicate joints, thereby producing ankylosis, was the cause of the deafness. In these and in other persons, who made the claim that they heard better in a noise, the apparent phenomenon was due to the more or less ankylosed condition of the ossicles, whereby more or less of the sounds given off in any noisy place were not received, constituting the deafness, and when the voice was raised, as it was invariably in such places, the sound produced by it was conducted by the sound transmitting apparatus with less confusion than by the normal ear, in which the ossicles must be in a to and fro movement, or else the innumerable noises would not be heard, and there would be no confusion of sounds.

DR. POMEROY inquired if the sound could not be muffled by putting cotton in the ear.

DR. HOLT replied that this only made the ear more sensitive.

DR. POMEROY remarked that if Dr. Holt's theory should prove true, it would change entirely the pathology of the disease in question.

DR. BRANDEIS has had experience diametrically opposite from that of the author. He is professionally connected with large iron works, where nearly all the workmen are affected with more or less difficulty of hearing. This, in his opinion, is not due to the great noises, but to the draught and exposure to great heat and cold, in consequence of which nearly all are affected with diseases of the naso-pharynx, which extends to the tubes and tympanum, as well as the ossicles and *membrana tympani*. Owing to the chronic catarrhal condition, we have complete or partial ankylosis and thickening of the drum-head, which renders them less susceptible to the impact of sound waves. In a noise the impact of sound waves is more forcible, and consequently we will have vibration of the conductive apparatus which transmits the sound to the labyrinth. The voice is not elevated in proportion with the increased noise, and therefore the betterment in hearing can only be attributed to the increased movements of the parts acted upon.

Dr. Theobald mentioned having met with cases in which the tuning-fork, when placed upon the *vertex*, was heard louder in one ear, and then when placed upon the forehead was heard louder in the opposite ear. He had not been able to explain this result.

DR. S. THEOBALD presented a paper on
COMPLETE CLOSURE OF BOTH EXTERNAL AUDITORY CANALS FOLLOWING CHRONIC OTORRHEA.

Patient, 13 years of age, had an attack of scarlet fever when 4 years old, which left her with a purulent discharge from both ears. After it had existed for several years, the running ceased after the breaking out of an eruption on the head, as the parents stated, but deafness persisted. The occurrence of pain in the right ear led the parents to seek professional advice. Both auditory canals ended in a cul-de-sac, 2 cm. deep on the right side and 1.7 cm. on the left. Auricles normally developed, and outer half of the auditory canals presented the normal appearance, but in place of reaching to the tympanal membrane, each canal ended abruptly a little beyond the extremity of the osseous meatus in a smooth, firm, concave floor, covered with thin integument, continuous with and similar to that lining the outer portion of the meatus and presenting to the probe the unyielding resistance of a thick bony septum. Hearing greatly impaired, but the patient was not profoundly deaf. This condition has persisted more than ten years with no apparent change. From another case, recently under observation, he believes this condition to be due to periosteal thickening.

The discussion of this paper was postponed to the afternoon session, and the Society then adjourned to 4 P. M.

AFTERNOON SESSION.—The second session was opened by the President at 4 P. M.

After the ordinary business was transacted Dr. Theobald's paper was discussed.

DR. POOLEY had seen a case similar to the one related by Dr. Theobald. The closure, however, was only on one side. The obstruction in the canal was bony and covered with common integument. It was the final result of a long-continued otorrhœa and gave the patient no inconvenience. She came on account of a purulent otitis with extension to the mastoid on the other side, which terminated fatally. This case was published some years since in the *New York Medical Journal*.

DR. KIPP thought that cases of bony occlusion of the external canal from otorrhœa were not as rare as the author seemed to think. He had lately had a case of this kind in a young girl in whom the canal was occluded by a bony structure covered with skin. He made a crucial incision in the skin and tried to perforate the bony structure with a drill, but failed. There was purulent inflammation of the middle ear on the other side, but the canal was of normal dimension.

DR. H. KNAPP read a paper on

THE TREATMENT OF AURAL POLYPI.

It is easier to remove large polypi from the ear than small ones, and they are much less likely to relapse. The reason is that large polypi invariably contract at their base, and become pediculated, and the narrow pedicle can be easily snipped off. The growth of a polypus can be easily demonstrated in the cases where, for instance, after squint-operation, a polypoid growth springs from the wound in the conjunctiva. Growing at first with a broad base, they are often treated with nitr. arg., only to become more irritated, while a little patient waiting may give a chance for removal of the growth by cutting its thinner pedicle with scissors, and no after-treatment but cleansing the eye is needed. The same refers to the ear, and a case, illustrative of the bad effects of removal of a small growth from the ear was given, where finally treatment was abandoned for more than a year, then to be followed by a most easy evulsion of a large polypus with thin pedicle. Dr. Knapp uses in order of frequency Hinton's forceps,

Wilde's or Blake's snare, Politzer's ring-knife, and O. Wolf's sharp-spoon. He uses by preference the forceps, and believes this to be free from the danger commonly attributed to it, because he does not resort to evulsion, before a pedicle is formed. Even if a polypus originates from the membrane lining the ossicles, the bone is probably carious, and its removal may be more an advantage than otherwise, and that a polypus can originate in the membrana tympani itself, he is not ready to admit, on account of the structure of that membrane, which resembles that of the cornea. For the treatment of smaller polypi or the roots of larger ones he uses alcohol and boracic acid, and finds that not only the abundance and offensiveness of the discharge is most effectually controlled, but also that the swollen mucous membrane shrinks more than by anything else. Frequently the alcohol contracts the polypi in such a way that they project distinctly and can easily be removed. His chief object in the treatment is: abstinence from repeated cauterizations, alcohol treatment, non-interference with granulations with a broad basis until they become pedunculated, and finally evulsion.

DR. THEOBALD stated that, after trying various applications to prevent the return of aural polypi, he had for some time placed chief reliance in a mixture of equal parts of boracic acid and oxide of zinc. He also mentioned that not long since upon traction with forceps upon a small polypus the malleus was drawn forth with the polypus, which was attached to it, but no evil effects resulted.

DR. POMEROY is convinced that no amount of cauterization will prevent the return of the growth. He is pleased with the results obtained in his practice from the use of the forceps.

DR. JOHN GREEN, of St. Louis, is in favor of revulsion, after changing the character of the polypus, for which he uses chromic acid applied directly to the polypus.

DR. KIPP stated that his experience with alcohol was very similar to that of Dr. Knapp. He, too, had come to the conclusion that in most cases, when the symptoms were not threatening, it was best to delay the removal of the growth until a pedicle had formed.

DR. BRANDEIS remarked that the leading indication in the treatment of aural polypi is the radical destruction of the base or roots. For this he preferred the galvano-cautery. He did not rate boracic acid very highly, and believed it only of service as boro-glycerine, and then it acts simply as an antiseptic.

DR. POOLEY thought that the evulsion of polypi with forceps was apt in some cases to set up an irritation which would extend to the brain, and related a case of his own which terminated fatally.

DR. NOYES regarded evulsion as perfectly safe and judicious when the polypus was developed from the external auditory canal, but believed it unsafe if it sprang from the tympanic cavity, when he prefers the snare. He uses nitric or chromic acid less than formerly. He uses boracic acid quite frequently now, and packs it in so as to completely fill the canal.

DR. PROUT stated that his experience with alcohol and boracic acid coincided largely with that of Dr. Noyes, but found that alcohol caused as much pain as any other applications. He thinks the advantage of the boracic acid treatment was largely due to pressure. A favorite application with him was glycerole of tannin.

DR. SEELY had never resorted very much to mechanical interference, but when he did so, he used the snare. He had used chromic acid several years and was probably the first to use it. This acid extends in depth and not on the surface as other acids do, hence its action is more free from danger. In using boracic acid, he packed the meatus completely. He called at-

tention to the fact that polypi and granulations can be effectually dealt with by milder, safer, and more efficient means than we are inclined to think.

DR. J. ORNE GREEN preferred the use of the snare, and related a case, reported to him by the late Dr. Edward H. Clarke.

DR. R. C. BRANDEIS presented a paper on

EXHAUSTION VERSUS INFLATION.

He spoke of the disadvantages attending the use of the Valsalva method, the catheter, and of Politzer's air douche. In all of these it is impossible to graduate the degree of pressure employed, and therefore there is an increased difficulty of hearing and also more tinnitus and vertigo than before. By using compressed air he is able to regulate the force of the current of air employed, and thereby obviates some of the last effects. In many cases, however, these methods prove unavailing, and then he employs traction or exhaustion of air from the external meatus. This he does by means of a Siegle's speculum, which is attached to an exhausting syringe, which can exert any degree of traction desired. By carefully watching the excursions and appearance of the membrane and chain of bones, the operator is able to determine when further manipulation should cease.

DR. SAMUEL B. ST. JOHN, of Hartford, has used an apparatus, somewhat larger than that described by Brandeis, in cases of chronic catarrh, in order to give the ossicles a chance of gentle exercise analogous to that of the joints in chronic rheumatism.

DR. MATHEWSON reminded the Society of the method pursued by Dr. Pinkney, of New York, published some years ago in the *New York Medical Record*.

ORAL COMMUNICATIONS

being called for, DR. KIPP stated that he had very often found *deafness combined with synchisis scintillans of the vibrans*.

DR. KNAPP stated that in a marked case of this disease there was no ear trouble.

The different papers read at the meeting were referred to the Committee on Publication.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—DR. J. ORNE GREEN, of Boston.

Vice-President.—DR. J. S. PROUT, of Brooklyn.

Secretary and Treasurer.—DR. J. J. B. VERMYNE, of New Bedford.

Committee on Publication.—DRS. J. J. B. VERMYNE, C. J. BLAKE, and J. O. GREEN.

Committee on Membership.—DRS. JOHN GREEN, H. J. MILLER, and C. H. BURNETT.

The Society voted to meet next year the day before the annual meeting of the American Ophthalmological Society, and at the same place, and then adjourned.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Eighteenth Annual Meeting, held at Lake George, July 26 and 27, 1882.

(Specially reported for THE MEDICAL NEWS.)

The Society met at the Fort William Henry Hotel, Lake George, New York, at 10 A.M., July 26, 1882, the *PRESIDENT*, DR. HENRY D. NOYES, of New York, in the Chair.

The Secretary announced the death of DR. E. REYNOLDS, of Boston, many years an Honorary Member of the Society.

The following is an abstract of the scientific work of the meeting:

JULY 26TH.—MORNING SESSION.

DR. CHARLES STEADMAN BULL, of New York, read a paper on

PULSATING VASCULAR TUMOR OF THE ORBIT AND EYE-LIDS, TREATED BY ELECTROLYSIS.

The tumor occurred in a female child, who was admitted to the Nursery Hospital in September last. It had grown to its present very large size since the second or third day after its birth, when the mother first noticed anything out of the way. The temporal and zygomatic fossæ were pretty well filled by it, and the area of redness had been progressing steadily, mainly upon the forehead. The child was healthy, with the exception of the condition of the left eye. Free pressure on the arteries made no difference in the size of the tumor, but pressure on the carotid stopped pulsation. There was no murmur over the tumor. Several methods of treatment were taken into consideration by himself and other physicians, as tying the larger or smaller vessels, giving ergot, trying electrolysis. The latter method was sustained only by himself. At first ergot was given, under which the tumor gradually diminished in size, but the child being taken away from the hospital the treatment was not continued; and at the end of some months when it was seen again, the tumor was enlarging. He then tried electrolysis, employing from four to twenty-two cells on several different occasions, with the result in the end of a steady diminution in the size of the tumor.

The paper was discussed by Drs. Knapp and Green.

DR. W. W. SEELY, of Cincinnati, read a paper on

REMAINS OF THE HYALOID MEMBRANE, WITH ATTACHMENT TO LENS, AND DETACHMENT FROM THE PAPILLA.

Also a paper on

SEROUS EFFUSION INTO THE VITREOUS, CAUSING TOTAL TEMPORARY LOSS OF VISION, DUE PROBABLY TO MALARIAL POISONING; RECOVERY.

In the second paper, the patient was a man 33 years of age, previously free from disease or injury of any sort. About September 15, 1879, he noticed rather suddenly dimness of vision and floating bodies; was just able to read. Ten days later, vision being worse, he consulted an oculist, who it seemed told him the eye was full of blood. He was sweated by jaborandi, etc., vision remained about the same for six weeks, when it became still worse, and leeches were applied, and various remedies given. Remained about three weeks in a dark-room; continued to grow worse. Vision cleared up somewhat within six weeks, and still further under phosphorus. About the middle of February, 1880, vision totally lost in about two hours. Returning for treatment, leeches were applied and patient remained abed in dark-room about six weeks. May 1st, Dr. Seely first saw him; found a long-standing external squint of one eye with extreme amblyopia and no perception of light in the other formerly good eye, except the faintest by the most peripheral upper and inner portion of the retina after mydriasis. Pupillary reaction limited. With undilated pupil everything blank under ophthalmoscope; dilated, upwards and inwards in the extremes, traces of red reflex. He had never seen anything of the kind before. Concluded the vitreous was filled with effused serum, and so far as he knew there could be but one explanation—malaria, though there was no history of it. Patient went home July 20, V. $\frac{2}{3}$. No trace of any fundal disease, nor trace of floating bodies; and patient said what he had called floating bodies was a waving before the eye. No treatment. September next he again complained of vision having become somewhat smoky. In October seen again, vision rapidly returned to $\frac{2}{3}$, floating bodies perceived with

difficulty by ophthalmoscope. Had a severe chill during this visit. Quinia given. April, 1882, he wrote that vision was about same as when he last saw the Doctor. No signs of kidney disease discovered, although patient complained of lame feeling in the region of the kidneys; quinia was again given.

We know, said Dr. Seely, that malaria produces a similar state of things in the kidneys, even a haematuria, and he was confident he had seen at least one case of effusion into the middle ear due to malaria. He asked if it was not probable that in the cases narrated, as in the kidney and bowels, the poison selecting the blood-vessels, prepared the way for the escape of the watery part of the blood, an effusion? The differential diagnosis between what was in this eye and a hemorrhage was not in his opinion at all difficult.

DR. READ J. MCKAY, of Wilmington, Del., read a paper on

DISAPPEARANCE OF IRIS AFTER EXTRACTION OF CATARACT.

Male patient, aged 57, farmer and mechanic, of excitable temperament, was operated upon September 16, 1879, by Graefe's method of extraction, under anaesthesia, which he took badly and which caused great congestion of face and head. Excision of iris was immediately followed by filling of anterior chamber with blood; iris was teased out, leaving very little in the eye. Five or six hours after operation maniacal excitement ensued, lasting several hours.

Forty-eight hours afterwards, examination of eye showed anterior chamber filled with blood, nearly obscuring iris. Moderate iritis ensued. Six weeks after operation he could read with a $+2\frac{1}{2}$ lens.

Several weeks thereafter, whilst visiting him at intervals of several days, the iris disappeared, and no trace of it was ever seen afterwards. The entire capsule of lens was uniformly opaque with deposits of blood-pigment upon it corresponding to site of original blood deposits.

February 24, 1880, a secondary operation was done upon capsule, followed by very good result, permitting him to see moderately well. This continued for some months, when he was subjected to great excitement, when dense opacity of vitreous ensued, from which he did not fully recover, and the eye was practically lost.

The PRESIDENT thought the probable explanation of the case was a reduplication of the iris, a folding back of the ciliary processes; and Drs. Seely and Bullard related similar cases to which they thought the President's explanation applied also.

DR. MCKAY also read a paper on

NON-PULSATING EXOPHTHALMOS WITH RECURRING THROMBOSIS OF ORBITAL VEINS.

Female patient, began at ten years of age to notice slight protrusion of right eye. It was more noticeable when angry and at time of menstruation. It increased very slowly up to time of marriage, between twenty-one and twenty-two years of age. During pregnancy no material change occurred, but during her three labors, which were severely straining, it grew rapidly larger and worse. At time of second labor several nodules of enlarged veins first appeared at upper inner angle of orbit.

February 17, 1881, she first visited me at the suggestion of her family physician, Dr. L. P. Bush, of Wilmington, Del. Then the protrusion of the right eye was three-quarters of an inch beyond that of its fellow. The right upper eyelid was greatly enlarged and congested (to double its usual size). The right orbital region was much swollen and congested. Her disfigurement was so great that she covered her face well when out of doors to prevent people staring at her. Ex-

amination failed to discover anything abnormal about the nose, antrum, or mouth; no pulsation was felt, and none detected by stethoscopic examination. Told her the protrusion was due to enlargement of orbital veins behind the eye pushing it out of orbit, and advised non-interference at that time. She then told me Dr. Agnew, of Philadelphia, had three years previously examined her and given the same opinion.

Early in April following, eversion of right lower lid caused her to send for me. It was easily reduced. Some days later I learned that Dr. Bush (who was attending her sick baby) had several times reduced it, and to keep it up had applied strips of adhesive plaster; this caused pain from pressure upon the eyelid and eye-bulb. It was removed, and a flannel pressure bandage applied, which gently raised the right cheek. This could not be borne either. The swelling and congestion of the contents and surroundings of the orbit increased. Shortly afterwards the occurrence of thrombosis of perceptible and palpable enlarged orbital veins was suspected, and soon established. Nursing of her baby was stopped about June 1, 1881. She improved somewhat in general health for three weeks afterwards; then enlargement of the orbital contents and surroundings again manifested itself, and the eye, which had been totally lost from sloughing of the cornea and plastic iridochroiditis, and was very painful, was removed under anesthesia. The orbit seemed to be filled with a mass of veins, feeling like a varicole, very thinly covered. The night after the operation her menses came on, and next morning she had intense pain in right orbit and right side of head. Second attack of thrombosis ensued. She manifested serious and threatening symptoms of purulent infection for some weeks; but then improved. In July her menses again appeared, and a third attack of thrombosis of a slight character accompanied it. She soon recovered from it. For some months thereafter slight swelling of the orbital contents occurred at each menstrual period. By the end of the year this ceased. In April, 1882, the everted, dependent, and enlarged lower lid was repositioned and kept up by strips of adhesive plaster. She has lately reported parts about orbit get smaller at menstrual epochs. She has entirely recovered.

DR. WILLIAM F. NORRIS, of Philadelphia, presented a paper entitled

HEREDITARY ATROPHY OF THE OPTIC NERVES, which, in his absence, was read by Dr. Harlan.

The first patient, æt 49, well developed, had complained of losing sight during the past year, and had now become so blind that he had difficulty in getting about without assistance. A cloud settled over his vision so that he could not see signals, being employed on a railroad. At present his eyes appear normal externally, the pupils of medium size, and respond to light. Central vision almost completely abolished in both eyes. Complains of bright light. Disk of the right eye slightly ovoid vertically, with choroid ring, slight central excavation, but the rest of the disk of a greenish-gray hue—entirely devoid of capillarity, but central vessels of about usual calibre. Choroid perhaps more granular than usual; very slight retinal haze. Disk of left eye more nearly round, remains of choroidal ring, scleral ring too marked, outward a black speckled patch one and a half times the width of main retinal veins.

Treatment, $\frac{1}{2}$ grain of strychnia three times daily, gradually increased to $\frac{1}{16}$ grain; result being improvement of vision, enabling the patient to walk about with much more safety. Strychnia treatment continued some time longer, but without apparent further benefit.

A first cousin of this patient was similarly troubled,

and under the same treatment the central cloud diminished, and peripheral vision was markedly improved. The ophthalmoscope had revealed greenish atrophy of optic nerves, with entire want of capillarity of disk; little change in calibre of central vessels.

Here was an illustration of hereditary atrophy, beginning with the maternal great-grandfather, and extending through five generations. One uncle, after becoming blind, recovered his sight sufficiently to resume his ordinary occupation.

In both these cases, and those of pigment degeneration of the retina, heredity is frequently observed, but in the one the affection always starts after puberty, with neuritic atrophy of the optic nerve, and cuts off the central vision, while peripheral vision remains comparatively unimpaired. The other, also hereditary, localizes itself in the periphery of the retina, often early in life, producing a secondary atrophy of the optic nerve, leaving central vision intact often for many years.

He believed that in these, as in almost all other atrophies, a certain degree of improvement in the peripheral vision is to be obtained by the persistent use of strychnia, and that it is due not to any specific action on the nervous system, but to the fact that it so increases arterial pressure as to drive a greater supply of blood into the shrunken capillary vessels of the optic nerve and retina, and thus restores proper nutrition.

THE PRESIDENT, DR. HARLAN, KIPP, and LITTLE, referred to instances of retinitis pigmentosa extending through several generations of the family.

DR. W. S. LITTLE, of Philadelphia, read a paper on

THE INFLUENCE OF THE FARADAIC CURRENT IN THE TREATMENT OF VITREOUS OPACITIES, WITH CASES.

The improvement found on diminishing the size of a vitreous opacity in a case of retinitis pigmentosa, which was being treated by the interrupted current with appropriate internal treatment, syphilis of a hereditary type existing, had led him to use it in all opacities of the vitreous, in addition to accepted methods of medication. He used it in 1877, but had recently used it in a larger number of cases.

Henri Curnier, in 1874, used the constant current in eight cases of vitreous opacity, with rapid improvement. Dor used both constant and interrupted in 1872 for change in choroid and retina.

The method of applying is either through one hand and upon the eye, or from nape of neck and upon the eye. A weak current and for a few moments, increasing time and strength at each application every other day till result is obtained. Satisfactory result is obtained in one, two, or three weeks, according to the amount of change in vitreous.

DR. C. S. MERRILL, of Albany, reported

A CASE OF GLIOMA OF THE RETINA IN A PATIENT TWENTY-ONE YEARS OF AGE.

The patient presented himself at the Albany Hospital, in November, 1878; was twenty-one years of age; had always enjoyed good health. There was complete detachment of the retina, which hung in folds and presented the characteristic appearances of glioma of the retina. The eye was removed; a portion of the fresh retina examined microscopically showed the growth to be simple glioma. The examination of the hardened eye showed the same, also, that the glioma proliferations had not extended into the optic nerve. Up to the present time, four years later, he has not had a return of the trouble, though now he is very low with phthisis, which began to develop about a year ago.

The case is of great interest, inasmuch as it is the

first ever reported of glioma of the retina occurring in a patient at such an advanced age.

DR. JOHN GREEN, of St. Louis, read a paper entitled
A CASE OF RUPTURED ZONULA, WITH REMAINING
ACCOMMODATION.

Also a second paper, entitled

AN OPERATION FOR ENUCLEATION, WITH REMOVAL OF
TARSAL CARTILAGES AND CONJUNCTIVAL SAC.

Three cases, in which this operation had been done, twice by himself, were related. In the first case, the patient being a young farmer, the operation was performed some years ago for epithelioma, involving the tissues of the orbit. Although the eye itself was intact, it had to be enucleated, in order to remove the whole of the diseased structure. The dissection included the whole of the conjunctival sac and the tarsal cartilages, being a removal of the growth from Tenon's capsule. The skin was brought together by two or three sutures, leaving a considerable gap next to the nose to heal by granulation. The greater part of the lachrymal gland doubtless was removed with the tumor, and there was no lachrymation or edema afterwards. He saw the patient two or three years after the operation. There was a perfectly smooth cutaneous covering of the orbit, and a scarcely visible incomplete linear cicatrix remained, indicating the original line of opening of the lids. The condition was certainly in all respects better than what could have been obtained had any part of the conjunctival sac been left. In the second case, the result of the operation also was satisfactory; likewise in a third case, the operation having been done by Dr. Arlt.

DR. GREEN also made some

REMARKS ON OPERATION FOR ENTROPION.

In opening his remarks, he said he accepted the explanation given by Arlt in his hand-book, that most cases of entropion and trichiasis of the upper lid are the result of trachoma. The first stage in the operation which he did to relieve this deformity consisted in making an incision through the conjunctival surface, parallel to the lid margin, and one millimetre from the opening of the Meibomian glands. It extended generally from end to end of the tarsus, separating it from the muscular layer of the orbicularis. The second stage of the operation consisted in lifting and retaining the lid margin upward, which might be done by taking hold of the row of cilia—if they remained, using them as a lever—lifting them up, and sticking them to the front of the lid with collodion, so that, after healing shall have taken place, the cilia are found to occupy their proper position and take proper direction. This simple procedure of availing one's self of the line of cilia is not always sufficient; it is generally advisable also to establish a cicatricial process in the integument, which is done by cutting out a strip of skin quite near to the point of origin of the eyelash. Two millimetres is the maximum breadth desirable to be removed. There is a cut through the conjunctiva and tarsus from within, the excision of a strip of skin from without, and the nutrition of the lid margin is preserved entirely through the muscular layer. Usually, sutures were then passed by the curved needle, drawing up the margin of the lid, and closing the wound made by the excised strip of skin. Formerly these sutures were left in, but on account of the irritation which they caused, he usually removed them very soon, at present retaining the parts in position by collodion. He had employed this method for the most serious cases of this deformity, and with the highest satisfaction. It was far superior to the methods commonly in use, from which wretched deformity often resulted. The number of sutures employed was usually three.

DR. RICHARD H. DERBY, of New York, read a paper entitled

A CASE OF ANÆSTHESIA OF THE RETINA, WITH CONCENTRIC LIMITATIONS OF THE FIELDS OF VISION; RECOVERY THROUGH INHALATIONS OF NITRITE OF AMYL.

Patient, a girl aged 8 years, nervous, excitable, grown rapidly of late, recently convalesced from severe attack of scarlet fever. On March 30th she complained of pain in and about the eyes, affecting sight. Vision about half of each eye; eyes examined under atropia, vision as before; no improvement with glasses. On each eye fields limited to five degrees in every direction from the point of fixation. Patient treated with small doses of oxide of zinc; directed to wear blue glasses. After two months vision in no way improved, and on June 1st, vision reduced to $\frac{1}{10}$ of each eye; fields limited as before. It now appeared that the optic disks were paler in their outer halves, deprived of their capillary blush. Inhalation of three drops of nitrite of amyl given daily, each inhalation followed by marked flush of face, with no immediate change for the better in vision. On June 3d, vision $\frac{1}{5}$; June 8th, V. each eye $\frac{1}{10}$, with enlargement of visual fields. June 9th, V. $\frac{1}{10}$ nearly; June 10th, V. $\frac{1}{10}$; again enlargement of fields. June 19th, fields of view normal, V. $\frac{1}{10}$.

The interesting point in this case was not the rarity of the affection, for it is not uncommon, but the persistence of it, the evidence of partial atrophy of the nerve, the tendency of the case rather to retrograde under treatment as ordinarily recommended, and its very marked improvement after use of inhalations of nitrite of amyl.

DR. HARLAN spoke of the case of an hysterical girl, who troubled them a great deal at a clinic for a long time on account of excessive photophobia, which they were unable to relieve by a great variety of methods adopted. Examination under ether showed a healthy fundus. At length an assistant suggested a trial of nitrite of amyl, which was consented to, everything else having failed. He gave her inhalations of it in large quantity, three times a day, and soon she returned to the clinic entirely cured. Some time afterward, however, the hyperesthesia returned, and this time nitrite of amyl failed to do much good.

DR. RISLEY had obtained some benefit from using inhalations of nitrite of amyl in photophobia from disease of the cornea in children. The case of a man was referred to who was relieved for a moment, but after suspending the inhalation photophobia would return.

THE PRESIDENT had reported a case to the New York Ophthalmological Society of a man who had been blind twenty-four hours when he presented himself at the hospital. The retinal circulation was found to be almost completely suspended. He wished to see what nitrite of amyl would do in hastening a cure. Under the inhalations the face flushed, and in about three minutes normal vision was restored. He also referred to the case of a child who had had a mild attack of scarlet fever, and afterwards suffered from a certain amount of conjunctival trouble and consulted a physician in Chicago, who pronounced the case one of retinitis. The child was brought east, and Dr. Noyes found a typical case of papillitis, choked disk in both eyes, but vision was $\frac{1}{10}$; no limitation of field, no impairment of ocular perception, no albuminuria or kidney trouble, no headache or constitutional disturbance. The case was novel to him. Dr. H. Derby referred to a similar case.

DR. RISLEY said he had examined a number of eyes reported as perfectly healthy, with perfect sight, no brain symptoms, yet in several there was the typical appearance of choked disk.

DR. HOWE referred to the case of a lady who had sudden loss of vision in one eye, which after a number of minutes disappeared, and her sight was practically as good as ever, though receiving no treatment. But the exact state of things returned again after some time, and he found the fundus presenting the appearance described by Dr. Derby. He was waiting to see if a cure would be effected in the same manner as before.

AFTERNOON SESSION.

DR. THEOBALD, of Baltimore, presented a description of a case of

CIRCUMSCRIBED ABSORPTION OF THE LENS, APPARENTLY OF TRAUMATIC ORIGIN, WITHOUT THE REMAINDER OF THE LENS BECOMING OPAQUE.

The patient was a female, 30 years old. A small opacity existed in the cornea near its outer margin, and to this a slender tag of iris was adherent. With this eye V. was $\frac{20}{xx}$ (?) and J. No. 1 could be read with ease. After dilation of the pupil, a well-defined crescentic notch was discovered in the outer margin of the lens, just behind the corneal opacity. A layer of opaque lens tissue formed the boundary of the notch, and in close proximity to this there were also a few punctate opacities in the lens. The patient had no knowledge of the eye having been injured. It was thought probable, however, that a penetrating wound, involving the cornea, iris, and lens, had been received in childhood. If such was the case, the arrest of the cataractous process was most singular and difficult of explanation.

DR. THEOBALD also presented an account of *A CASE IN WHICH A FRAGMENT OF GLASS HAD REMAINED IN AN EYE—PROBABLY IN THE CILIARY BODY—FOR TEN YEARS WITHOUT PRODUCING SERIOUS CONSEQUENCES.*

The accident was caused by the explosion of a glass test-tube, a minute fragment of glass being driven through the cornea into the anterior chamber, where it was seen hanging by a shred of tissue attached to the corneal wound. This, however, gave way after a few minutes, and the glass fell through the pupil into the posterior chamber and disappeared. Marked inflammatory reaction followed, but, under active treatment, subsided in about two weeks, leaving the eye with no trace of the injury but a minute corneal scar. Since then it has remained entirely free from irritation, and has given the patient no inconvenience whatever; and up to the present time—now ten years after the accident—its vision remains normal for both near and distant objects.

DR. GREEN recalled a case which he saw in consultation, in which a piece of percussion cap had lodged in the lens without producing general opacity, the period of tolerance having covered a good many months.

DR. POOLEY had seen a case in which a triangular piece of glass, about three millimetres in size, lay apparently in the iris, midway between the pupil and attached margin of the iris. It had produced no symptoms demanding interference.

DR. KNAPP thought the tolerance of foreign bodies in the eye usually depended more upon their size than upon other conditions. The fear from uncleanliness was often exaggerated. The foreign body to be innocuous must be small, but all small bodies were not innocuous.

THE PRESIDENT mentioned a case in which a piece of iron had passed through the cornea and was adherent to the lens, having remained in this position seventeen years, and a number of physicians had desired to remove it, but fortunately he had not allowed any one to do so yet.

DR. KIPP had under care a practitioner, who, for about eighteen years, had had a piece of percussion cap, probably in the retina, sight remaining good, and no irritation. The case was further discussed by the President, Dr. Knapp, Dr. Kipp, and Dr. Theobald.

DR. G. HAY, of Boston, then read a paper on

A CASE OF EXTENSIVE HEMORRHAGE BETWEEN THE CHOROID AND SCLEROTIC.

The patient was a man who had enjoyed very good health, except for some dyspeptic troubles and some wandering pains, for which his physicians used the word gouty. Dr. Hay saw him on the 21st of May for extensive chemosis, which he supposed would be likely to pass away in a few days. Nine days afterward the chemosis had diminished, the patient was in good spirits; it was supposed he would get well. Two days later he was asked to see him because of soreness about the malar bone, the lower lid slightly swollen, the bulboconjunctiva very much injected, the tension about normal; patient saw with that eye but not so well as with the other. Three days later he had pain about the eye in the night; there was more serous chemosis and more injection of the bulboconjunctiva; slight discoloration of fluid in anterior chamber; pupil as in healthy eye; vision not so good; patient pale and feeble. A few days later pupil did not respond as well as in other eye. June 10th, under ophthalmoscope, large grayish swelling came into view from above, showing no vessels at that time; and when he looked down a dark mass came into view from below, which was less defined. Upper mass somewhat evenly convex and dark gray. As the case was unusual, he had the patient see Dr. Hasket Derby, another specialist, both of whom considered the case to be one of intra-ocular tumor. Not being able to account for the condition in any other manner, Dr. Hay enucleated the eye for the supposed tumor on June 13th. On examination it was found that the anterior half of the choroid was separated from the conjunctiva very extensively all round by a layer of blood which in some parts was three-sixteenths of an inch thick, extending between the membranes into the posterior half of the eye where it gradually became less thick.

DR. KNAPP had described exactly a similar case in an article on intra-ocular tumors. It taught us to be cautious in the matter of diagnosis in such cases.

DR. G. C. HARLAN, of Philadelphia, then described *A Test for Simulated Monocular Blindness.*

DR. W. S. LITTLE related a case of *Remains of Hya-loid Artery.*

DR. F. BULLER, of Montreal, read a paper on *A Somewhat Peculiar Case of Alopecia of the Eye-lids.*

THE PRESIDENT, DR. H. D. NOVES, of New York, read a paper on

AIDS IN THE REMOVAL OF FOREIGN BODIES FROM THE CORNEA.

In the first paper he described a convenient method for illuminating the eye and magnifying any foreign body which may have become attached to the cornea, thus facilitating its removal without the aid of an assistant. The two and a half inch magnifying lens and the illuminating lens were respectively attached to a finger of one hand, the fingers on which hand also were used to retain the lids open, while with the other hand the foreign body could be removed. He had found this method exceedingly convenient, especially where no assistant was at hand. The lenses could be carried in the vest pocket.

In this connection he referred to a case of foreign body in the cornea, it not having gone through into the anterior chamber, but projecting a little beyond the inner surface of the cornea and not sufficiently on the outer surface to be removed by the forceps. From

a face view the wound was larger than the foreign body. Considering the usual methods of removal in such cases to be hardly applicable or appropriate, he took a needle of suitable shape, inserted it alongside the foreign body, and succeeded in getting the needle directly behind the body and tilted it out, losing scarcely any of the aqueous humor.

He mentioned the case of a child who, a week before he saw her, received an injury by the falling of a chestnut-burr upon the unclosed eye while looking up into a tree. Half a dozen little points of the burr, which were sticking in the cornea, were removed with a fine pair of forceps.

DR. SEELY referred to a similar case, the patient having fallen upon a weed from which many fine spines projected. He was unable to remove the several pieces upon the cornea with the forceps, but had to make an incision the entire length of each, and lift it out of its bed. The boy has perfect sight, and there is no opacity of the cornea.

DR. MCFARLAND had extracted a foreign body from the cornea of a patient in the same manner referred to in the President's first case.

DR. NOYES then read a second paper—

PENETRATION OF A FOREIGN BODY INTO THE ORBIT; PROBABLE WOUND OF THE BRAIN, AND TOTAL AMAUROSIS.

The case was that of a boy who, last April, in playing with a mate, accidentally turned his head in a manner to receive the sharp point of a wooden sword on the lower and outer margin of the orbit, just above the malar bone, the penetrating fragment, six and a half centimetres in length, breaking off at its point of entrance into the orbit. It was extracted by some person in the house. A physician was called who gave a hypnotic. Total blindness in that eye occurred immediately after the injury. Dr. Noyes saw the patient twenty-four hours later. The pupil was partially dilated, and did not respond to light. The optic nerve was intensely red, very slightly swollen; veins turgid. The other eye appeared normal. No constitutional symptoms developed, although it was feared, on account of the length of the foreign body, that the meninges and brain were injured. It was uncertain whether the affection of the optic nerve was due to direct injury by the penetrating object or indirectly to hemorrhage. In this connection he referred to "a case of lodgement of a foreign body in the cavities of the nose, orbit, and cranium, where it remained five months; removal by operation; subsequent trephining for pus in the brain; death, autopsy;" which he published in *The American Journal of the Medical Sciences*, for July, 1882.

JULY 27TH.—MORNING SESSION.

The Society was called to order at 9 A.M. by the President.

THE PRESIDENT, DR. NOYES, read a paper entitled

REDUCTION OF SIZE AND TENSION OF THE EYEBALL BY TOTAL AVULSION OF THE IRIS AND BY NEURECTOMY.

Stimulated by the experiments of Priestly Smith with regard to the causation of glaucoma, he desired to learn whether this author's theories concerning the origin of tension in glaucoma could be substantiated by actual observation. Two cases were related; in the first there being glaucoma of both eyes, total blindness existing in one, and it was the operation and observations upon this eye which related to the matter in hand. The entire iris was removed through a small aperture in the posterior part of the anterior chamber. The lens was of that large size which, according to Smith's theory, might be the cause of the glaucoma. The final result of the operation was a decrease in the tension and relief from pain. The lens, however, projected

forward into the anterior chamber, being kept continually in contact with the cornea, which showed greatest tension to exist from behind. In this case, the lens was one of the largest he had seen, being nearly the diameter of the cornea, against which it lay after the operation, and would seem, therefore, to reinforce Smith's theory. The same operation was performed on the second patient, in whom the lens was not of unusual size. The tension, as long as the patient was under observation, which was but a short time, remained as before. No remarkable reaction followed in either case.

The next case related was one in which optociliary neurectomy was performed on a patient who had hydrocephalus, the result being a very satisfactory diminution in the size of the eye to nearly normal, without inflammation or a tendency to repeat the process of enlargement.

DR. THEOBALD remembered to have seen Mr. Barwell, some years ago, remove the entire iris in a case of glaucoma, in which iridectomy had been of no benefit, and he understood that Mr. Barwell had done it several times, in some cases with benefit.

THE PRESIDENT then remembered himself having seen Mr. Barwell do the operation.

THE PRESIDENT, DR. NOYES, then related

THREE CASES OF TUMOR OF THE EYE.

In the first case, a man, fifty-one years of age, received an injury to the eye, after which a small tumor, which had previously existed at the inner canthus, began to enlarge, and reached nearly to the outer canthus, covering over the front of the eyeball, and connected with the upper lid. It was removed. A plastic operation was done. The patient had no further trouble for about four months, when a swelling occurred in front of the ear of the same side. When he presented himself at the institution, this tumor had enlarged considerably. He was very cachectic, evidently having malignant disease. The autopsy showed cancerous nodules in the lungs, brain, on the skull, and various portions of the body. The fact that the disease did not return in the eye on which the operation was done, showed the propriety of not performing enucleation.

The second case was that of a man about seventy years of age, from whom he removed a small growth, about the size of a pea, upon the sclera, between the cornea and outer canthus. Microscopical examination showed that it had all the characteristics of an epithelial growth; but it had not returned, the operation having been performed two years ago.

The third case was one of small-sized intra-ocular tumor, concealed by detachment of the retina. The patient for some time had been under the observation of a specialist, who regarded the case simply as one of detachment of the retina, but an operation, which had to be done to relieve pain, verified the President's diagnosis as above.

DR. BULLARD referred to a case in which he enucleated the eye for a sarcomatous tumor, and afterward applied chloride of zinc paste within the orbit in case some of the remaining tissues might be affected. The patient afterward had symptoms of meningitis, but entirely recovered. An interesting fact was that there should be meningitis without any necrosis of the bones intervening between the eyeball and meninges.

DR. PROUT referred to a case in which he used chloride of zinc to the orbit after enucleation, there being no attempt afterward at granulation, but no bad result occurred.

DR. KNAPP, of New York, read a paper on

METASTATIC CHOROIDITIS.

It was introduced by the report of the case of a young lady who, by exposure during menstruation, con-

tracted a metritis which laid her up for ten days, and was relieved by poulticing. During the attack first one eye inflamed, but recovered in three days. A day after the first eye had become inflamed the other was similarly affected, but got rapidly worse and blind in a few days, from fully developed purulent iridochoroiditis ending in atrophy of the globe.

DR. KNAPP said the great majority of cases of metastatic choroiditis that had come under his notice, resulted from cerebro-spinal meningitis. Blindness occurring in the course of that disease was, however, not always brought about by metastatic choroiditis, but in rare cases by optic-nerve atrophy. He reported a case where one eye had become blind from the latter, the other from the former, affection. He thought that the well-developed cases were incurable, but that there was also a certain number of milder cases, where the embolic process was limited in extent, that might get well. He laid stress on the prophylactic treatment, care during menstruation and confinement, and as curative measures recommended cold applications to the eye, and quinia internally.

DR. GEORGE C. HARLAN, of Philadelphia, reported a case of

SARCOMA OF THE LACHRYMAL GLAND FORCING THE EYEBALL DOWNTOWARDS, FORWARDS, AND OUTWARDS.

The patient was a man 70 years of age, in excellent health, and the tumor, which had been growing for four years, had never given the slightest pain. It was as large as a hen's egg, and had completely dislocated the ball, forcing it downwards, forwards, and outwards. The top of the equator was below the level of the pupil of the other eye. Removal was entirely accomplished, as there were no adhesions, and two weeks after the operation the eye had nearly resumed its normal position. Vision, which had only been quantitative, was improving. Microscopical examination showed the growth to be a spindle-celled sarcoma. Neoplasms of the lachrymal gland, particularly of a sarcomatous character, are considered rare. The points of special interest in the case are the entire absence of pain, and the external direction of the dislocated eyeball. An internal direction would be naturally expected, and is frequently included, as is also pain, among the diagnostic symptoms.

DR. KNAPP remarked that he had lately removed a similar large tumor of the lachrymal gland. Primary union took place, and the globe returned to its natural position, normally movable. There was optic neuritis after the operation, now slowly disappearing. The aspect of the cut surface was different from what he had seen in these tumors. It was homogeneous, purplish-red, of the consistency of flesh, no amyloid reaction. Immediate cursory examination with the microscope showed a scant amount of connective tissue fibres with many small round and spindle-shaped cells. No indication of a glandular structure.

DR. HARLAN also exhibited

AN IMPROVED TRIAL GLASS FRAME, which he thought had some advantages over any now in use; the principal of which are, that it is very light, and that the troublesome spring for holding the glasses is dispensed with. The graduated grooved arc for cylinders is attached to the lower half of a light ring, the tip of which is connected with the horizontal bar by a sliding clamp. There is but one groove, but there are hooks on either side of it for holding glasses, so that three glasses can be used together.

DR. KIPP, of Newark, N. J., read the

HISTORY OF A CASE OF ACUTE INFLAMMATORY GLAUCOMA, WHICH WAS FOLLOWED BY CEREBRO-SPINAL MENINGITIS.

The patient, a German woman, fifty-one years of

age, who had previously been in good health, was attacked by severe pain in back and head ten days before, for the relief of which she had, on the advice of her physician, applied fly-blister to the right forehead and behind the ear. Half an hour after their application, very severe pain in the right eye came on, and has continued since. Eserine was applied by another physician, who sent the case to the reporter for operation. The eye was found to present the usual symptoms of acute glaucoma. An iridectomy was made at once, and gave immediate relief. Three days later, the other eye became glaucomatous, and was treated with eserine, which cured this eye in a few days. Ten days after the iridectomy, the patient was discharged cured; but ten days later, the eye which had been iridectomized, became again inflamed and very painful. The left eye, a few days later, showed many of the symptoms of acute glaucoma, and an iridectomy was also made on this eye. The operation proved, however, of no avail. The pain in the head continued. Distressing nausea came on, and the patient had night sweats and mild delirium at night. The delirium gradually increased in severity. Bilateral convulsions and involuntary evacuations; coma. The patient died ten weeks after first symptoms showed themselves. Leeches were applied to the temples. Quinia, calomel, and iodide of potassium were given at different times. In the opinion of Dr. Kipp, the glaucoma was in this case due to the cerebral disease.

THE PRESIDENT referred to a case in which an attack of acute glaucoma was the initiatory symptom of serious brain phenomena, which terminated in death. There was found softening of the brain, with extensive and very severe atheromatous degeneration of the arteries.

DR. S. B. ST. JOHN, of Hartford, then read a paper on

GLAUCOMA FULMINANS.

In March of this year he was sent for to go into the country to see Mrs. L. He found a woman of 59, well nourished and enjoying general fair health, who said that, about forty hours before his arrival, as she was sewing, she felt as if something had got into her left eye. Nothing could be seen by her friends and she kept on, but the irritation increased. In about two hours a second inspection revealed mydriasis, and the pain was increasing. She suffered terribly through the night, but morphia finally relieved the pain, and she discovered great impairment of sight and sent for him. He found the right eye normal in structure and function, the left with pupil dilated, T + 3, media obscured, and V = hand at 6". Diagnosed glaucoma, and performed an iridectomy at once. This eye did well, and left eserine with the family physician to be used in case the other eye became affected, which I represented as quite probable. On the fourth day after the beginning of the trouble in the left, and the second day after the operation, vision began to fail in the right, and pain to be present, but the pain was at no time as it had been in the fellow eye. Eserine was used at once, and he reached the patient thirty-six hours after to find the right eye the counterpart of the left one when first seen. An iridectomy was at once done, and the progress of the case from that time was satisfactory, the lady reporting two months later with V $\frac{2}{5}$ in one eye, and $\frac{4}{5}$ in the other, having had no pain or other trouble since the operations. The case was reported because of the comparative infrequency of glaucoma fulminans, and because of the short time intervening between the affection of the two eyes.

DR. ST. JOHN also read a paper entitled

REMOVAL OF PARTICLES OF IRON FROM THE LENS BY MEANS OF A MAGNET.

In January last a blacksmith came to him with the

following history: Three months before, while shoeing an ox, he felt something strike his eye, but the irritation soon passed off, and he thought no more about it for two days when the eye became painful, and he went through with what was probably a sharp attack of iritis without treatment other than anodynes. The vision in the eye was reduced to perception of light, but the eye became quiet and remained so till two weeks before coming for advice, when it became painful and the fellow eye sympathized. Dr. St. John found a traumatic cataract with post-synechiae, and just at the edge of the pupil a brownish spot extending beneath the pupillary edge. In this brownish spot he thought he could see a black speck. The patient was etherized, and a free incision made with a Graefe knife. He then attempted to do an iridectomy to facilitate the escape of the lens substance, but the traction of the forceps upon the adhesions ruptured the capsule, and lens matter welled up into the anterior chamber. Remembering the black spot which he had seen, he passed the point of a Gruenig magnet into the soft lens matter, and upon withdrawing it found a particle of iron adhering, which was too small to be measured, but which was about twice the size of an ordinary period mark in print. The case made a good recovery, so far as the relief of irritation to the eye operated on, and of the sympathetic irritation was concerned, and the vision was decidedly improved.

DR. MITTENDORF, of New York, presented a paper on

EMBOLISM OF THE CENTRAL ARTERY OF THE RETINA.

He reported three cases of this rare disease under observation. The first case, that of a middle-aged lady who had had previous attacks of rheumatism and valvular lesions of the heart, was suddenly blind after violent exercise, which was followed by gradual clearing up of the upper part of the field of vision. In this case the embolism could be distinctly seen in the upper branch of the central artery. The vision improved in course of time to $\frac{1}{100}$, but the field of vision did not improve materially, leaving the lower part of the field obscure.

The second case, that of a literary gentleman, about forty years of age, who had likewise a severe attack of rheumatism several years ago which resulted in valvular lesions of the heart. In this case the disease came on suddenly on going rapidly up-stairs. The seat of the embolus must have been high up in the main artery, for the characteristic appearances of the retina were soon superseded by marked atrophic changes which were especially manifest in the optic disk. There was complete blindness in the beginning, but in the course of a week a collateral circulation, which could be distinctly seen in the shape of two ciliary vessels at the nasal side of the optic disk, restored a portion of the retina to its function, and a small part of the field of vision remained. The vision in this small temporal portion of the field improved gradually up to $\frac{1}{100}$, whilst in the remaining part of the retina no perception of light was seen.

The third was that of a middle-aged German, who had also rheumatism and mitral regurgitation. He was attacked suddenly one evening, on lifting the shutters of his store, with blindness of the left eye. The field of vision in this case cleared up the next day considerably, leaving the nasal part entirely free.

The first two cases remained under observation for nearly a year, and the vision of those eyes remained tolerably good. The treatment in these cases consisted in the administration of digitalis, and later of strychnia and electricity. All these cases present heart lesions with a previous history of rheumatism. In two of the cases the left eye, in one the right eye, was the seat of the embolism. In all of them the onset of the disease was sudden, and was followed by complete blindness

in the beginning. The characteristic appearances of the retina were very marked, and the cherry-colored spot which is universally found in these cases remained in the one case for nearly ten months; in the other case it was followed by hemorrhagic effusions into the fovea centralis, and the red spot disappeared with absorption of the effused blood. In all the cases a valuable amount of vision was preserved, which is rather unusual. He depended especially on digitalis as a heart tonic, but was afraid to use nitrite of amyl because it might give rise to a new embolic process. By this treatment in the one case the embolus was apparently forced from the main artery into one of the branches; in the second case the administration of digitalis seemed to improve the collateral circulation very materially. The strychnia and the electricity were employed as nerve tonics for those portions of the retina whose functions were not destroyed.

The following papers were read by title: *A New Method of Oblique Illumination; Premature Delivery to prevent Blindness; A Single Glass for all Distances after Cataract Operations in Young People*; by DR. E. G. LORING, of New York. *Embolism of the Central Artery of the Retina*, by DR. W. F. MITTENDORF, of New York.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President, HENRY D. NOYES, M.D., of New York.
Vice President, WILLIAM F. NORRIS, M.D., of Philadelphia.

Secretary and Treasurer, RICHARD H. DERBY, of New York.

The Society then adjourned, to meet at the Kaaterskill House, Catskill, New York, on the third Wednesday of July, 1883.

CORRESPONDENCE.

LETTER FROM BERLIN.

An interview with Dr. Koch concerning Tuberculosis.

YESTERDAY I was present during a conversation between one of the assistants at the Pathological Institute and of the assistants (mitarbeiter) at the Gesundheits-Amt. The talk was about syphilis. The worker with germs was bewailing the fact that he had not yet succeeded in isolating the specific cause of syphilis, though he had worked long and earnestly with it, and I know him to be as skilful almost as Koch himself. But during his experiments with brood condylomata, he had isolated a virus which, when injected into the body of a rabbit, produced in the substance and upon the surface of the heart, strange to say, nodular masses which looked like, but are not, gummata. These masses or nodules, larger than a pea, invariably occurred, and the observation had been made hundreds of times.

The conversation was short, and might seem insignificant, but it was a straw which shows whence and whither is the prevailing wind.

"What do you take the nodules for?" inquired the pathologist.

"I find nothing specific in them," was the answer.

"But I mean what is the structure of it?" naturally asked the pathologist.

"I have not looked at its structure."

"What, you have not examined its structure! You do not know if it be a neoplasm?"

"No," was the response of the worker with germs. "Finding nothing specific in it, I was not interested in it any further." (I ought to say here, for the benefit of those not acquainted with microscopic work, that examinations with color tests, for colors, and examination for structure, cannot be made at the same time.)

Blank amazement was upon the face of the pathologist.

"What would you expect to find if you did examine its structure?" he asked.

"Well, probably giant cells, multiple nuclei, the ordinary signs of an inflammation," was the reply.

"And how would you account for them?" asked the pathologist.

"Why, I should regard them as the ordinary effects of a necrosis, produced by the action of germs," was the reply; "nothing more, and nothing less."

And this reminded me of a conversation I had with Koch himself when I first came. I was here fifteen years ago, I said, and I had come there to study pathology, as it was then called—meaning, of course, morbid anatomy. I ventured to say that I thought the field of exploration in this direction was pretty well worked up, and that not much further could be expected from it from a purely practical standpoint; that as a practitioner of medicine I had become dissatisfied with the therapeutic results of studies in morbid anatomy, which, after all, could only show us the effects of disease, and had now come to study etiology, in the hope that better fruit would follow a knowledge of the cause of disease.

To this Koch replied that etiology is like a new mine which is just being explored. One must not, because a vein has been discovered, arrive at once at the conclusion that we may find gold in every direction. "It is very much like mining in California," he continued. "A man comes upon gold, and therefore every one believes that all that is necessary is to put in a pick. There has been, and there will always be, much disappointment in the search after truth in every field."

"But," I ventured to say again, perhaps in self-justification, "one can only judge at first from surface indications, and if he feels that he has worked in barren fields, he will likely turn at last to others."

"Then the good that we are to look for as the results of these investigations will come, for the most part," he said, "through prophylaxis, and not so much through direct cure. I believe myself that too much complication has arisen from studies only in one direction."

"You do not believe much, then," I asked, "in the possibility of discovering a method of reducing the virulence of the tubercle bacillus, and thus, by inducing a mild form of the disease, secure a future immunity?"

"I can speak, of course," he answered to this, "only from what is at present known. I can say nothing as to future possibilities, but I will tell you why I consider such an event improbable. It is because there is no analogy between small-pox and tuberculosis. Small-pox is a disease which confers an immunity by one attack. It is so rare as to be a clinical curiosity for an individual who has once had the disease to have it again. But does not every one know that this is not true of tuberculosis? Is it not rather in the experience of every practitioner that one who has had tuberculosis once does have it again and again, until he finally dies of it? Of course, many cases recover entirely; nevertheless, every practitioner knows that one attack does not give immunity to future attacks. That is one standpoint from which to regard this question, and it is the standpoint of clinical observation. Now we can add to this another substantiating fact. You saw yourself the dog which was injected with a minimum quantity of tubercle bacilli. The injection was made in the abdominal cavity, and it produced an exquisite tubercular peritonitis. Nevertheless, the dog finally recovered entirely, and seemed perfectly well. Then the same dog was used again, and a large quantity or number of the bacilli was introduced into the abdominal cavity. If you will go down to the animal quarters to-day, you will see that the dog is fatally ill. The abdomen is

highly tumefied, and death will probably occur to-day or to-morrow. Now, if one attack conferred any immunity to future attacks, it ought to have been impossible to have produced the second attack. Hence I do not now think it possible to prevent the disease in that way, nor do I think it necessary to try it. For individuals affected with the disease can be prevented from disseminating it."

"By destroying the sputum," I interposed.

"Not only the sputum" he said at once, "but every source of contamination. So soon as it is universally recognized that tuberculosis is an acute infectious disease, it will be treated like the other acute infections, by better care of all the persons attacked, by isolation, perhaps, in properly arranged institutions, etc., and by having far more care than ever paid to the meat and milk of tuberculous cows, cows suffering with *perlsucht*, which we now know to be tuberculous."

"About basilar meningitis," I asked, "would you kindly repeat what you said before?"

"Well, I repeat, that I have always found somewhere a caseous gland, usually among the bronchial glands, often among the mesenteric glands, that could account for the source of the bacilli in the brain without involving the possibility of inhalation directly through the nose. We have here some beautiful specimens" (holding one up), "which show a caseous mass protruding into the calibre of a vessel. From this mass particles might be easily washed off into the general circulation. This microscopic specimen was brought in a few days ago, and I had no difficulty, after tinting it with the proper colors, in showing [putting in under the microscope], as you may now see yourself, the presence of myriads of bacilli."

"The opponents of the germ theory in general," I said, "claim that the germs produce their deleterious effects by chemical action, rather than by direct destruction or consumption of the tissues."

"As to that," he replied, "no one knows as yet how they act. Possibly they may evolve chemical products which do the harm. But that is after all only a side and subordinate question, for if the germs were not there the effects would not follow. It is enough for us now to have discovered the presence of them as the cause of the disease. Thus for instance in trichinosis, it is not probable that the trichinæ kill by their mere presence. It is not improbable that they may evolve some chemical products, and through them indirectly produce the results; but the prime fact remains that, if the trichinæ are not there, the disease does not occur. Some future investigations may show us just exactly how the results are produced. This is a question more of scientific than of practical interest. By the way, will you tell me why, among your people, who are known to be the most practical people in the world, so little care is taken to prevent trichinosis? In the examinations which I have made of American hams, one in ten turns out trichinotic, and other observers here have often found trichinæ in one in fifteen."

I was not aware that the percentage was so enormous as that, I said, and could only reply that cases of trichinosis in my part of the country, that which furnished the most pork for exportation, were so rare as to hardly supply us with enough clinical material for illustration purposes. To this Dr. Koch urged that our people probably do not eat much raw meat.

This, and the fact that the meat used at home and that exported is not the same in character, will probably reconcile the apparently discordant facts.

At this point the conversation was interrupted by the announcement that a party of military physicians had been sent in to witness the demonstrations. Every day the tide of visitors increases, until it is becoming a serious interruption to the regular work. Hereupon, I

asked permission to report the substance of the conversation, assuming myself all responsibility for misconceptions, knowing that there was abundant opportunity for future corrections. With the amiability which is characteristic of men of science the permission was given at once, and I took down my notes on the table before I left.

I have yet to describe the exact methods of preparation of the culture substances, and the details of the color reactions for practical use in recognition of the tubercle trouble in the sputum or in sections; for I feel sure that, whatever progress may have been made at home with practical work, some disappointment and discouragement must have occurred to the apprentice, for want of mention of details which the master-workman takes it for granted are well known.

J. T. W.

BERLIN, June 30, 1882.

NEWS ITEMS.

CANADA.

(From our Special Correspondent.)

NEW MEDICAL SCHOOL.—The Medical Faculty of the new Western University of London, Ont., has been organized, and the prospectus issued for the first session. The Dean is Dr. Charles G. Moore, and the Registrar Dr. John A. Stevenson. Among well-known men connected with the Faculty are Dr. Bucke, Medical Superintendent of the London Insane Asylum, and Mr. William Sanders, ex-President of the American Pharmaceutical Association. There are now ten medical schools in the Dominion, three of which are French and seven English.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The meeting this year will be held in Montreal on the 23d of August. Members of the profession who purpose being present are requested to send their names to Dr. Osler, 1351 St. Catherine Street.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending July 22, 1882, indicate that whooping-cough, remittent fever, and erysipelas increased, and that influenza, puerperal fever, tonsillitis, consumption, measles, inflammation of the bowels, cholera morbus, pneumonia, cholera infantum, and bronchitis, decreased in area of prevalence.

Small-pox was reported present during the week ending July 22, and since, at 10 places, as follows: at Detroit, Flint, Lansing (one case, convalescent), in the township of Burton, at Mt. Morris, and at Hastings, July 22; at Wayne Co. Pest House, at Deerfield, Lapeer Co. (one case), July 23; at Grand Rapids (12 cases), July 24; and at Westwood, ten miles north of Kalkaska, July 27. At Grand Rapids one man had small-pox who had it 16 years ago.

Sanitary inspectors report, for the week ending July 22, 15 cases of measles brought by immigrants arriving at Port Huron, and 6 cases of measles among those arriving at Detroit.

SENATOR CAMERON'S JOINT RESOLUTION.—At the annual meeting of the Juniata Valley Medical Society, held at Cresson, Cambria County, Pa., July 18, 1882, the following preamble and resolutions, after free and full discussion, were unanimously adopted, viz.:

Whereas, The Hon. J. D. Cameron, one of our Senators in the Congress of the United States for Pennsylvania, has introduced into the Senate a joint resolution, providing that it shall be a misdemeanor, punishable by a fine of five hundred dollars and dismissal from office, for officers of the United States Government—civil, military, or naval—to make discrimination in

favor of or against any school of medical practice, or its legal diplomas, or its duly and legally graduated members, in the examination and appointment of candidates to medical service in any of the departments of the Government; therefore,

Resolved, That this Society, representing the medical profession of the entire Juniata Valley and largely that of Central Pennsylvania, regards said joint resolution of Senator Cameron as tending only to degrade and subvert the science and rational practice of medicine, and injure the public service.

Resolved, That a copy of this action be forwarded by the Secretary to Senator Cameron, with a respectful request that he will not further favor or urge the passage of said joint resolution by the Senate.

THE COLUMBUS MEDICAL JOURNAL.—The first number of which, bearing the date of July, 1882, is just received. It presents the general appearance of the late *Ohio Medical Journal*, of which it seems to be a continuation, having the same editors and publishers. It contains several valuable original papers, has a full table of contents, and the editorial pages are marked by the same sprightliness which characterized its predecessor.

ILLNESS OF DR. WM. H. MUSSEY.—We learn with regret that Dr. Wm. H. Mussey, the distinguished Cincinnati surgeon, was stricken with paralysis on Monday afternoon, and at the latest report was not expected to live.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.—will hold its Sixth Annual Meeting at Newport, R. I., on August 30th and 31st, and September 1st.

CHAIR OF SURGERY IN THE UNIVERSITY OF EDINBURGH.—MR. JOHN CHIENE has just been elected Professor of Surgery in the University of Edinburgh, to succeed the late Prof. Spence.

MR. F. M. BALFOUR has been elected Professor of Morphology in the University of Cambridge, England.

MR. T. SPENCER WELLS, Surgeon to the Queen's Household, has been elected President of the Royal College of Surgeons of London.

PROF. VOGT has been called to the Surgical Chair in Grieswald, in place of the late Prof. Hueter.

M. PASTEUR has received a medal from a committee formed from the members of the Académie des Sciences, Académie de Médecine, Société d'Agriculture, and the Faculté des Sciences, in consideration of his important discoveries in pathology.

ACADEMIE DE MEDICINE.—The committee appointed for the purpose, have proposed the following names for the vacancy in the Section of Physics and Chemistry: 1st, and *ex aequo*, MM. Garid and Javal; 2d, M. Bouchardat; 3d, M. Hardy; 4th, M. Onimus.

THE MANUFACTURE OF OPIUM.—The *Scientific American* for July 29, 1882, contains an interesting illustrated article on the processes of manufacture of opium.

KOCH'S INVESTIGATIONS.—The British Association for the Advancement of Medicine by Research has requested Mr. Watson Cheyne to undertake, under the auspices of the Association, the verification of the results lately obtained by Koch on the subject of tuberculosis, and the comparison of these with the results obtained by Toussaint and other observers, and have made a pecuniary grant for the purpose.

LIGATION OF THE INNOMINATE ARTERY.—The last report of Mr. Thomson's case of ligation of the innominate artery (see *THE MEDICAL NEWS*, July 15th, p. 82) is to the twenty-seventh day after the operation. The patient continues to do well, temperature normal, pulse 86; the track of the drainage-tube has healed, and only a small superficial sore now remains unhealed. The aneurism is without pulsation, and is becoming smaller.

This case will no doubt revive the oft-discussed question of the justifiability of this operation. Of late years, the general opinion has been against it, and in most of the surgical text-books this view is strongly expressed. It is doubtful how often the operation has been carried out. There are five cases attributed to Dupuytren, Lynch, Pirogoff, Bergelsky, and Peiscotto, which do not rest on sufficient evidence to enable us to include them in our list of cases; in all of these cases the operation, whatever it was, proved fatal. But there are twelve undoubted cases performed respectively by Mott (1818), Graefe (1822), Norman (1824), Arendt (1824), Hall (1830), Bland, Lizars (1837), Hutin (1842), Cooper (1859 and 1860), Gore, and Smyth. Of these, eight cases perished from hemorrhage, one from acute pericarditis, one from inflammation of the sac of the aneurism and pleuro-pneumonia, and one from blood-poisoning. Smyth's case is the only one that recovered, and this only after the patient had experienced four attacks of secondary hemorrhage, and had had his vertebral artery ligated. In many of the fatal cases, although death took place many days after the operation, the aneurisms did not show any evidence of consolidation. We shall be very glad if Mr. Thomson's case prove ultimately successful, as it now promises to do. But although a month has elapsed since the operation, and all looks well, we cannot forget that in two cases—Graefe's and one of Cooper's—death occurred from hemorrhage on the sixty-seventh and forty-first days respectively. Recent surgical advances have altered the position of this operation to some extent, for they have provided us with several materials which, while successful in leading to the permanent occlusion of the artery, do not cause suppuration of its coats. This removes one great source of danger. But the deep position of the artery, its shortness and its relations to other important structures, render the procedure a very difficult one. There are at least four cases reported where the surgeon has been unable to complete the operation.

Since the above was written, Mr. Thomson has forwarded the following particulars of the progress of his case: "My case has now reached its thirty-fourth day. On the thirtieth day there was some bleeding through the sinus, which re-opened. Bleeding stopped spontaneously, and has not recurred. Patient has still normal temperature—in morning, pulse 88. Tumor perfectly still and much reduced in size. Some pulsation apparent in region of the ligatured vessel. No carotid, temporal, or radial pulse." "Violent hemorrhage took place on the thirty-ninth day. It was controlled by shot-bags, and has not recurred since—that is, for sixty hours. There was an interval of nine days between the first and second bleedings. The patient, on July 16, declared that he had never felt better, but I expect a fatal result. He has now survived forty-one days."

—*Lancet*, July 15 and 22, 1882.

RUSSIAN MEDICAL CONGRESS.—A Russian Medical Congress will shortly be held at Moscow, after the opening of the exhibition at that city. Among the chief subjects of discussion will be papers on the recent epidemic of diphtheria in Russia, and the mutual relations of State Medical Legislation and Local Sanitary Laws.

NEPHRECTOMY.—On July 12th Mr. Christopher Heath excised the kidney in a young child. The organ was the seat of a rapidly developing sarcomatous growth. The operation was completed without much loss of blood, and the condition of the child was hopeful until the following morning; it then somewhat rapidly sank, and died eighteen hours after the operation.—*Brit. Med. Journ.*, July 15, 1882.

DIED, on July 6th, 1882, in Heidelberg, PROF. NIKOLAUS FRIEDREICH, in the 57th year of his age.

Prof. Friedreich had been suffering for several years from an aneurism of the aorta, which proved fatal by rupturing into the pleura. His principal works were the articles on diseases of the heart in *Virchow's Handbook*, on diseases of the larynx and nose, a work on progressive muscular atrophy, and the paper on disease of the pancreas in *Ziemssen's Pathology*, and a large number of other valuable pathological papers. Prof. Friedreich was born in Würzburg in 1825, studied medicine, and was appointed privat docent of pathology in that university. After *Virchow* was called to Berlin, Friedreich succeeded him as extraordinary professor, a position which he held until 1858, when he was called as ordinary professor of special pathology to Heidelberg, where he was also Director of the Medical Clinic, and founder of the Psychiatric Clinic.

—On July 9th, DR. ANDREW BUCHANAN, late Professor of Physiology in Glasgow University, at the advanced age of eighty-four. He is best known as one of the first who indicated the true nature of coagulation of the blood.

NOTES AND QUERIES.

"A CANULATED NEEDLE."

To the Editor of THE MEDICAL NEWS.

Sir: In your issue of the 15th inst., I notice "a canulated needle" of Dr. George McClellan's, which is a counterpart of my "tenaculum needle," described in the *New York Medical Record*, Oct. 13, 1877. This needle was placed by me in hands of the Messrs. Tiemann in 1876, and perfected and manufactured by them in 1877, and it not only fulfills all the indications of Dr. McClellan's instrument, but has, in addition to a tenaculum and suture needle, a straight or slightly curved needle and a wire-twister attached.

Yours respectfully,

C. J. CLEBORNE, M.D.,
Medical Inspector, U. S. N.

NAVAL HOSPITAL, PORTSMOUTH, N. H.,
July 24, 1882.

[WE are in receipt of numerous letters of the above tenor, in reply to all of which we may say that it is only claimed for the needle described in our issue of July 15th, that it is a convenient adaptation of an instrument which is well known to be old in principle.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 25 TO JULY 31, 1882.

RAYMOND, H. J., First Lieutenant and Assistant Surgeon.—To proceed at once, with necessary attendants, from Whipple Barracks, *via* Fort Verde, to the scene of recent engagements with hostile Indians, near General's Spring, and bring in those wounded to Fort Verde, and remain in charge of post hospital there until further orders.—*S. O. 112, Department of Arizona*, July 19, 1882.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.